



Health Santé  
Canada Canada

# Healthy Home Environmental Health Survey

## Final Report

### Prepared for Health Canada

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Canada 

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March 2022

Health Canada commissioned Kantar to conduct a public opinion research survey assessing Canadians' knowledge, awareness and behaviours on environmental health issues. This study was conducted online with 2,187 Canadians. 1,502 were drawn to be reflective of the population from age, gender and regional perspective and the remaining n=685 included an oversample of each of the following groups: Parents/guardians of children aged 6 and under (n=153), pregnant people or people planning to become pregnant in the next 6 months (n=190), seniors (65 years or older) (n=152), and newcomers to Canada (in Canada 5 years or less) (n=190)

Cette publication est aussi disponible en français sous le titre: Sondage sur la salubrité de l'environnement pour des maisons en santé

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# 1. Executive Summary

## 1.1. Research Purpose and Objectives

### 1.1.1. Background

The Chemicals Management Plan (CMP) is a jointly managed, (Health Canada and Environment and Climate Change Canada) horizontal initiative aimed at reducing the risks posed by chemicals to Canadians and their environment.

Health Canada works to increase the public's awareness of the risks associated with chemicals and pollutants, as well as proposing actions that could be taken by Canadians to reduce their exposures.

In 2017, an online survey was conducted to assess Canadians' knowledge, awareness and behaviours on environmental health issues. Results of this survey helped to shape the Healthy Home campaign that was launched in 2019. The Healthy Home campaign provides science-based information to Canadians that motivates them to take action to protect themselves and their families from chemicals and pollutants in and around the home. The campaign aims to move from awareness to actual behaviour change.

The results of the survey will serve as a baseline to help the program measure its effectiveness under a renewed CMP. It is essential to establish a baseline of the perceptions of the health risks of chemicals in order to effectively tailor the engagement and outreach with Canadians, including the most vulnerable. Specifically, the results will help continue to shape the Healthy Home campaign into its next phase.

### 1.1.2. Research Objectives

The overall objective of this research was to determine Canadians' awareness and understanding of chemicals and pollutants, as well as their actual behaviours related to these risks at home. More specifically, the survey was designed to address the following objectives:

- Assess target audience's knowledge of environmental health issues;
- Determine which environmental health issues are of concern to Canadians;
- Identify Canadians' current environmental health protective behaviours;
- Identify barriers and motivators to taking action to reduce the health risks from possible contaminants in the home;
- Discover how Canadians prefer to receive their information on this topic; and
- Compare results, where possible, with baseline surveys from 2016 and 2017.

## 1.2. Summary of Findings

### Product related concerns

The vast majority of Canadians were able to identify that some common household products pose a health risk (89%). Primary products of concern include pesticides (74%), lead contained in paint (69%), household chemicals/cleaners (60%), and/or paint strippers/thinners (60%). Only half (50%) were aware that certain chemicals in building materials like adhesives, sealants, or insulators could pose health risks.

Fewer were able to identify that certain chemicals in home fragrance (36%), personal care products (28%), craft/hobby materials (24%), composite wood products (24%), and/or natural health products (15%) may pose health risks, while one-in-ten (11%) did not think any of the previously mentioned products posed health risks.

### **Environment related concerns**

Canadians identified common environmental threats as health risks, including cigarette smoke (77%), carbon monoxide (77%), mould/humidity (72%), asbestos (70%), radon gas (64%), and radiation (64%). Close to half also identify cannabis smoke (51%), putting batteries/lightbulbs/chemical products in the garbage (49%), or flushing/throwing out pharmaceuticals and medications (46%) as health risks. Fewer are concerned about wood smoke (39%) or single use plastics (34%), while environmental risks like indoor air (23%), outdoor air (18%), drinking water (16%), or soil (11%) rank lowest among health concerns. While this list is not directly comparable to 2017 results, it does appear that Canadians' concerns about carbon monoxide and cigarette smoke have increased since the last wave of research (41-44% considered a health risk in 2017).

### **Chemical related concerns**

Canadians are better able to recognize the health risks of chemical products than in 2017. Most identify lead (72%), mercury (71%), and formaldehyde (59%) as health risks. While not directly comparable due to different product lists in the 2017 survey, fewer (39-55%) identified these chemicals as a health risk in 2017. Between one-third and one-half of Canadians are concerned about other household chemicals, including benzene (47%), Bisphenol A (43%), boric acid (43%), flame retardants (41%), phthalates (35%), aluminum (32%), talc (31%) and triclosan (31%).

### **Environmental Health Concerns**

Canadians' primary environmental health concerns vary widely. When asked to choose their top three health concerns from the lists mentioned above, Canadians were most likely to say carbon monoxide was their primary health concern (17%), followed by mould/humidity (11%), and cigarette smoke (9%).

### **Personal Care Products**

More than half of Canadians (58%) are interested in the ingredients found in their personal care products, with 43 per cent saying they check ingredients lists of their products, while fewer say they avoid products with specific ingredients (30%). Among those who check or avoid specific ingredients in their personal care products, the most common ingredients of concern are formaldehyde (48%) and aluminum (43%).

### **Home Cleaning**

When cleaning their homes, Canadians generally say they follow most safety precautions. However, one-in-ten say they always (7%) or usually (7%) mix household chemical products together, which suggests a sizeable minority of Canadians are engaging in potentially hazardous practices.

### **Food Safety**

Most Canadians appear to take steps to keep harmful chemicals out of their food. The majority say they discard single use-plastic containers (79%), look for a "microwave safe" label on containers before microwaving (74% always or usually do), or store food in food-grade containers (62%). Many also say they use their range hood when cooking (60%) and let the tap run cold before drinking water (57%).

However, a sizeable number say they always or usually store foods in single-use plastics (36%), heat foods in single-use plastics (19%), or pour hot liquids into single-use plastics (18%).

### **Home Renovations**

Most (81%) Canadians have completed interior renovations in their home. This includes both minor projects like painting furniture or walls to more major projects like finishing a basement. Of these, there was an even distribution between renovations completed in the past 12 months (29%), past five years (26%), or more than five years ago (26%).

Both lead and asbestos may be present in Canadian homes built before 1990-1991. Asbestos was used in some homes built prior to 1990, while homes built before 1991 may contain lead-based paint. However, only one-third of Canadians say they always or usually consult a professional before removing asbestos (35%) or test for lead-based paint before removing or stripping paint from walls (31%). Of note, Canadians who own a home built prior to 1976 are the least likely to say they always or usually consult a professional about testing or removing asbestos (25% vs. 36-41% among those who own a home built after 1976). Similarly, these those who own homes built prior to 1976 are less likely to consult a professional about lead paint (25% vs. 35%). This suggests a significant number of Canadians with older homes are potentially putting their health at risk during renovations.

### **Environmental Health Behaviours**

When it comes to preventative measures, many Canadians do not appear to be engaging in environmental health testing, such as, testing for lead, radon or asbestos. Few Canadians are testing their drinking water, with just over one-in-ten saying they tested their water for potential contaminants (15%) or lead (13%). Even fewer (9%) say they have tested for radon in their homes.

In terms of inspection and monitoring behaviours, Canadians generally take more steps than they do for environmental health testing; however, uptake remains low. One-quarter complete annual inspections for their furnace (27%), air conditioner (23%), hot water heater (19%), or gas or wood fireplace (17%).

### **Protective Behaviours**

As part of the Healthy Home campaign, Health Canada recommended Canadians take ten simple steps to protect themselves from chemicals and pollutants in their environment. When asked specifically about how often they engage in these behaviours, over half of Canadians say they always or usually engage in healthy home behaviours, including keeping indoor moisture and humidity levels low (74%), disposing of chemical products according to municipal guidelines (69%), turning on exhaust fans or opening windows when showering (65%), cleaning mould with water and dish soap (62%), and taking unused pharmaceuticals to a pharmacy for disposal (54%).

Despite carbon monoxide being the number one safety concern of Canadians, less than half (47%) have installed a carbon monoxide alarm in their home. This also marks a decrease from 2016, when over half (57%) said they had a carbon monoxide detector in their home. Among the 47 per cent of Canadians that have installed a carbon monoxide alarm in their home, the majority (57%) installed one in a hallway outside sleeping areas or the main floor of the home (50%). Fewer said they installed alarms beside a fuel burning appliance (29%), in a bedroom (16%), or in a basement (4%).

### **Barriers and Motivators**

Barriers to maintenance of a healthy home may include awareness of health hazards. Despite the low awareness of many health risks outlined in this report, one-third of Canadians say they have no barriers because they currently maintain a healthy home (33%). Many Canadians (30%) also feel they do not have control over issues because they are renters. This signals that renters may not be aware of their provincial or territorial tenant rights.

These were also the most common responses in the 2016 research; however, while results are not directly comparable, the magnitude of those who feel confident in their ability to maintain a healthy home has decreased. This may be a function of Canadians now having greater awareness of various health risks.

When it comes to encouraging Canadians to maintain a healthier home, the majority cite personal health (61%) or the health of their family and children (51%) as their primary motivators. Relatedly, many (38%) were also motivated by fears about illness due to unaddressed risk and environmental concerns.

When it comes to motivators for implementing solutions, motivations included a better understanding of risks (44%), easy and free ways to address risks (42%), government funding (32%), and government incentives (29%).

### **Reaching Canadians about Environmental Health Issues**

Canadians look to a variety of sources for information on potential health risks in their home. The most common include search engines (39%), manufacturer product labels (29%), the Government of Canada website (25%), friends and family (24%), or the Public Health unit website (23%). This marks a departure from 2016, when manufacturer product labels were the most frequently consulted source of health risk information (38%) and few (5%) consulted the Government of Canada website. This suggests a significant number of Canadians may be aware of the Healthy Home campaign and trust the government to provide health risk information.

When looking for information on health risks, more than half of Canadians prefer the format of websites (57%), followed by YouTube (27%) and speaking to a health professional (24%). In 2016, websites were also the preferred source of information about health risks (65%). Since that time, YouTube, Facebook, and other social media sites are increasing in preference (0-17% in 2016 vs. 4-27% in 2021).

### **Parents of children six and under**

Young children are at increased risk from pollutants and chemicals due to their smaller bodies, breathing rate, heart rate, and developing organs. Consequently, parents or guardians of young children (0-6) are more likely than the general population to be concerned about the environmental health risks of cigarette smoke (89% vs. 76%), carbon monoxide (88% vs. 76%), and/or mould/humidity (82% vs. 72%), and are more likely to say they keep household chemical products out of reach and sight of young children (89% vs. 66%). Parents of young children are also more likely than the general population to follow almost all safety measures when completing renovations, including keeping children away from worksites.

Regarding other safety behaviours and concerns, parents of young children are quite similar in their behaviours to the rest of the general population (i.e., those with older or no children). This suggests parents of young children may benefit from greater education about mitigating risks, including not heating food in single-use plastics, not using boric acid in crafts, reducing mould growth, servicing woodstoves or fireplaces annually, and checking the Air Health Quality Index (AQHI) before planning outdoor activities.

### **Pregnant People**



As with young children, chemicals and pollutants pose an elevated risk for developing fetuses. Thus, Health Canada advises additional safety measures for pregnant people that include limiting chemicals and pollutants as much as possible, staying out of the house during repairs or renovations, and avoiding the microwaving and pouring of hot liquids into single-use plastic bottles, as these may melt or leach chemicals into food.

Pregnant people were more likely to say they had renovated in the past five years, but also more likely to agree they always or usually kept vulnerable people (including themselves) away from the worksite (80% vs. 65% among the general population).

However, when it comes to other safety behaviours of concern, pregnant people generally do not behave differently than the general population. This includes a minority that heat food in single-use plastics, mix household chemicals, or test for lead in house paint or drinking water. While pregnant people are directionally more likely than the general population to be concerned about boric acid (52% vs. 43%) these figures suggest half of pregnant people may not know this household chemical may pose developmental and reproductive health risks.

Not unexpectedly, pregnant people report greater barriers of cost (30% vs. 20% among the general population) and not having enough time (21% vs. 12%). As with the general population, pregnant people are most likely to look to social media for information on potential health risks in their home; however, pregnant people are also more likely to look to social media than the general population (24% vs. 11%) and to rely on friends and family as a source of information (40% vs. 23%). This supports continuing to use social media to target this population.

## **Seniors**

Older adults in Canada (55+) differ from younger and middle-aged Canadians (18-54) in a number of ways that suggest this group is more mindful of health risks in the home. While this survey did include a subsample of seniors (65+), there were no major differences between those 55+ and 65+ unless otherwise noted.

Older adults (55+) were more likely than those under 55 to say they were concerned about the health risks of all chemicals, pollutants, and personal care product ingredients included in this research. Those 55+ were also more likely to say they follow all safe renovation practices, have carbon monoxide alarms installed, and have their furnace, fireplace, or air conditioner serviced annually. They were also the least likely to report any practices that could compromise food safety. Encouragingly, those 55+ were also more likely than their 18-54 counterparts to say they bring unused pharmaceuticals to a pharmacy for disposal (67% vs. 44-48%).

## **People with pre-existing health conditions**

Canadians with pre-existing health conditions generally behaved very similar to those without health conditions. However, this group was understandably more concerned overall about the health risks of all chemicals, products, and pollutants included in this research.

The Government of Canada recommends that people with pre-existing health conditions consult the AQHI before planning outdoor activities. While those with a pre-existing health condition are more likely to check the AQHI during a heatwave than those without a health condition (25% vs. 15%), the low uptake of this tool may suggest a need for further awareness of risks and benefits.

## **Newcomers to Canada**

Newcomers to Canada differed significantly from the general population in a number of ways that suggest this population needs additional supports to mitigate their health risks.

More specifically, when compared the general population, newcomers to Canada:

- Are less likely to be concerned about the risks of most environmental concerns;
- Are less concerned about the health risks of chemicals;
- Are more likely than the general population to say they always or usually heat food in single-use containers (30% vs. 19%) or pour hot liquids into single-use containers (27% vs. 17%);
- Are less likely to say they usually or always take unused pharmaceuticals to a pharmacy for disposal (43% vs. 56%); and
- Are less likely to have installed a carbon monoxide alarm (34% vs. 47%).

However, newcomers say they are more likely than the rest of the population to read ingredient lists (60% vs. 40% among gen pop) and avoid specific ingredients (39% vs. 29%). They are also more likely to test for lead in their water (23% vs. 13% among gen pop) or house paint (14% vs. 7%).

When it comes to motivations for change, newcomers are more likely than the general population to be concerned about the health of their family and children (56% vs. 46%) and environment (48% vs. 35%), while a major barrier is being a renter so not having control over the issue of concerns (46% vs. 28%). When looking for information on health risks, as with the general population newcomers generally look towards search engines, but are also more likely to prefer almost all social media formats, including YouTube (45% vs. 26% among gen pop) and Facebook (20% vs. 14%).

### **Comparisons to Previous Years**

In 2016, Health Canada commissioned baseline research on healthy home behaviours titled Canadian Environmental Health Habits and Behaviours Survey. While this survey was similar in scope, changes the questionnaire mean that most results are not directly comparable. Where results are comparable, the following changes versus 2016 were observed:

- The number of Canadians who report installing a carbon monoxide alarm has decreased (47% in 2021 vs. 57% in 2016);
- In 2021 Canadians are looking to a wider variety of sources for information on potential health risks in their home, with search engines (39%), manufacturer product labels (29%), the Government of Canada website (25%), friends and family (24%), and/or the Public Health unit website (23%) being stated most often. In contrast, most Canadians consulted manufacturer labels in 2016 (38%) and few (5%) consulted the Government of Canada website; and
- Websites remain the preferred format for information on health risks but this has decreased vs. 2016 (57% vs. 65%). Since that time, YouTube, Facebook, and other social media sites have risen in preference (4-27% in 2021 vs. 0-17% in 2016).

Similarly, Health Canada commissioned a study in 2017 titled Chemicals Management and Environmental Health Issues Survey and Focus Groups respectively. Results were not directly comparable due to different sampling and questionnaires, but the following directional differences have been noted versus 2017:

- Canadians appear to be increasingly able to recognize the health risks of some chemical products, including lead (72% in 2021 vs. 55% in 2017), mercury (71% vs. 50%), and formaldehyde (59% vs. 39%);

- Canadians appear to be concerned about the environmental health risks of carbon monoxide (77% in 2021 vs. 44% in 2017), cigarette smoke (77% vs. 41%), and radon gas (64% vs. 28%); and
- Canadians are more likely to have tested their homes for radon (9% in 2021 vs. 5% in 2017).

### 1.2.1. Strategic Implications

The results of this research suggest some positive trends around awareness of health risks among Canadians. However, the current research suggests many knowledge gaps continue to exist that may be putting Canadians at greater risk of adverse health impacts from chemicals and pollutants. As such, there is an opportunity for the Healthy Home campaign to further support Canadians in a number of areas including:

1. A continued focus on environmental threats to health and how Canadians can address them.
  - While awareness about the risk of carbon monoxide has increased, less than half of Canadians have taken the step of installing a carbon monoxide alarm. Similarly, many Canadians now report concerns about asbestos, lead, and radon, but few take steps to test for these contaminants.
2. An increased focus on the risk of food safety, particularly as it concerns single use plastics.
  - Many Canadians are engaging in behaviours that risk chemicals leaching into their food and beverages, including pregnant people and parents of young children who are at particular risk. Further, single-use plastics rate low on the list of environmental health concerns among the majority of Canadians.
3. Increased outreach to vulnerable groups, including pregnant people, parents of young children, and people with pre-existing health conditions.
  - People in the aforementioned at-risk groups behave similarly to the general population when it comes to most behaviours, suggesting these populations could benefit from further information about risks and suggested precautions. Further, all of these groups are more likely than the general population to say they are motivated to change behaviours for their personal health or the health of their family, which suggests they will be receptive to receiving information on potential health impacts.
  - Encouragingly, seniors take more safety steps and are more conscientious overall about health risks than the general population.
4. Increased focus on newcomers to Canada who need additional supports mitigating health risks.
  - Newcomers were at a greater overall risk in almost all areas identified in this research. Look to better connect with this population in ways that speak to their primary concerns (personal, family, and environmental health) through online channels where they are more engaged.
5. Awareness remains a primary barrier for Canadians when it comes to maintaining a healthy home. One notable barrier is that of home ownership, with many Canadians saying health risks are out of their control because they rent their dwelling. This signals that these Canadians may not be aware of their provincial and territorial tenant rights or of tests and inspections they can complete independently. Renters may also not realize that there are many actions that they can personally take to create a healthier home environment. Given that newcomers to Canada are disproportionately likely to be renters, addressing knowledge gaps among renters will also likely have a positive impact on newcomers' health risks.

### **1.3. Methodology**

An online survey was conducted among 2,187 Canadians aged 18 years and older;

1,502 were drawn to be reflective of the population from age, gender and regional perspective and the remaining n=685 included an oversample of each of the following groups: Parents/guardians of children aged 6 and under (n=153), pregnant people or people planning to become pregnant in the next 6 months (n=190), seniors (65 years or older) (n=152), and newcomers to Canada (in Canada 5 years or less) (n=190).

This survey was conducted online using a panel sample. As such this constitutes a non-probability sample, and margin of error therefore cannot be calculated and conclusions from these results cannot be generalized to any population.

A pre-test was undertaken on January 21, 2022 obtaining 10 English and 10 French completions, including probing questions. Based on the results of the pre-test, no changes were required and as such the results of the 20 completes were included in the final data set. The survey was in field from January 24 – February 7, 2022.

A detailed methodology can be found in Chapter 4.1.

#### **1.3.1. Sub-group analyses, statistical significance and rounding**

Analysis was undertaken to establish differences between the total population that was surveyed and a number of demographics within this group. More specifically analysis was undertaken to identify any differences based on age, gender, region, household income, those with children in their household, those with disabilities, those with a health condition, dwelling type, home ownership, dwelling age, those who have completed home renovations. Analysis was also undertaken to determine differences between the general population and groups of interest/vulnerable populations which include parents/guardians of children aged 6 and under, pregnant people or those planning to become pregnant in the next 6 months, seniors, and newcomers to Canada. Exact breaks can be found in the detailed tables. Only differences significant at the 95% confidence level are presented in this report. Any differences that are statistically significant (t-test) between these subgroups are indicated by denoting the column letter within the tables throughout the report. For example, in the table below Older Canadians (55+) are significantly more likely to say they have installed a carbon monoxide alarm in their home than younger and middle-aged Canadians (18-54).

	Total (A)	18-34 (B)	Age	
			35-54 (C)	55+ (D)
<b>Base = actual</b>	(2187)	(732)	(767)	(688)
	%	%	%	%
Installed a carbon monoxide alarm in your home	47%	37%	43%	58% BC

The numbers presented throughout this report are rounded to the closest full number. Due to this rounding, in some cases it may appear that ratings collapsed together are different by a percentage point from when they are presented individually, and totals may not add up to 100%.

#### 1.4. Contract Value

The total contract value for the project was **\$99,996.32** including applicable taxes.

#### 1.5. Statement of Political Neutrality

I hereby certify as a representative of Kantar that the deliverables fully comply with the Government of Canada political neutrality requirements outlined in the Directive on the Management of Communications and Procedures for Planning and Contracting Public Opinion Research. Specifically, the deliverables do not include information on electoral voting intentions, political party preferences, or standings with the electorate or ratings of the performance of a political party or its leaders.



Tanya Whitehead

Kantar

Vice President, Public Practice Leader

## 2. Detailed Findings

### 2.1. Research Purpose and Objectives

#### 2.1.1. Background

The Chemicals Management Plan (CMP) is a jointly managed, (Health Canada and Environment and Climate Change Canada) horizontal initiative aimed at reducing the risks posed by chemicals to Canadians and their environment.

Health Canada works to increase the public's awareness of the risks associated with chemicals and pollutants, as well as proposing actions that could be taken by Canadians to reduce their exposures.

In 2017, an online survey was conducted to assess Canadians' knowledge, awareness and behaviours on environmental health issues. Results of this survey helped to shape the Healthy Home campaign that was launched in 2019. The Healthy Home campaign provides science-based information to Canadians that motivates them to take action to protect themselves and their families from chemicals and pollutants in and around the home. The campaign aims to move from awareness to actual behaviour change.

The results of the survey will serve as a baseline to help the program measure its effectiveness under a renewed Chemicals Management Plan (CMP). It is essential to establish a baseline of the perceptions of the health risks of chemicals in order to effectively tailor the engagement and outreach with Canadians, including the most vulnerable. Specifically, the results will help continue to shape the Healthy Home campaign into its next phase.

#### 2.1.2. Research Objectives

The overall objective of this research was to determine Canadians' awareness and understanding of chemicals and pollutants, as well as their actual behaviours related to these risks at home. More specifically, the survey was designed to address the following objectives:

- Assess target audience's knowledge of environmental health issues;
- Determine which environmental health issues are of concern to Canadians;
- Identify Canadians' current environmental health protective behaviours;
- Identify barriers and motivators to taking action to reduce the health risks from possible contaminants in the home;
- Discover how Canadians prefer to receive their information on this topic; and
- Compare results, where possible, with baseline surveys from 2016-2017.

### 2.2. Canadians Knowledge and Concerns of Environmental Health Issues

#### 2.2.1. Product related concerns

The vast majority of Canadians were able to identify that some common household products pose a health risk (89%). Primary products of concern include pesticides (74%), lead contained in paint (69%), household chemicals/cleaners (60%), and paint strippers/thinners (60%). Only half (50%) were aware that certain chemicals in building materials like adhesives, sealants, or insulators could pose health risks. Fewer were able to identify that certain chemicals in home fragrance (36%), personal care products (28%), craft/hobby materials (24%), composite wood products (24%), and/or natural health products

(15%) may pose health risks, while one-in-ten (11%) did not think any of the previously mentioned products posed health risks.

Demographic variables play a role in level of concern about household product threats:

- Younger Canadians (18-34) are least likely to be concerned about the health risks of all listed products, while those 55+ are the most concerned age cohort;
- Quebeckers are least likely to be concerned about the health risks of the listed products (17% say concerned about none vs. 4-11% in other provinces);
- Newcomers to Canada are less likely than the general population to be concerned about the health risks of all listed products;
- Pregnant people are more likely to be concerned about at least one product than the general population (94% vs. 87%);
- Those with a health condition are more likely to be concerned about the health risks of all listed products; and
- Those who own a home built before 1976 are more likely than those who own a home built during 1976 or later to be concerned about health risks of lead paint.

Full details can be found in Exhibit 2.2.1.a and 2.2.1.b below.

**Exhibit 2.2.1.a Product related concerns by Total, Age, Region**

	Total (A)	Age			Region				
		18-34 (B)	35-54 (C)	55+ (D)	Atlantic (G)	Quebec (H)	Ontario (I)	Prairies (J)	BC (K)
<b>Base = actual</b>	<b>2187</b>	<b>732</b>	<b>767</b>	<b>688</b>	<b>152</b>	<b>480</b>	<b>874</b>	<b>417</b>	<b>264</b>
Pesticides, herbicides, insecticides	74	62	73B	84BC	79	72	75	31	30
Lead contained in paint	69	52	69B	82BC	82HIJ	61	72HJ	64	76HJ
Household chemicals such as kitchen and bathroom cleaners	60	52	60B	67BC	64	57	62	63	58
Turpentine, paint, paint strippers/thinners	60	45	60B	71BC	62	56	61	61	60
Building materials such as adhesives, sealants or insulation products	50	39	49B	59BC	53	42	52H	51H	53H
Home fragrance products such as scented candles, room sprays or air fresheners	36	25	35B	44BC	41H	25	41H	35H	38H
Personal care products such as cosmetics or hair products	28	24	26	31B	37	17	30	31	30
Composite wood products such as plywood, particle board or medium-density fibreboard	24	22	21	26	21	16	26H	23	31H
Materials used in hobbies or craft projects	24	16	22B	32BC	29H	10	29H	27H	29H
Natural health products such as herbal remedies, vitamins and minerals, probiotics	15	15	15	14	15	9	16H	17H	18H
None of the above	11	14D	13D	8	4	17GIK	11	11	8

*QPThreat: Product Threats. Which of the following products, if any, do you think could pose health risks to you and your family?*

*Note: Letters denote statistically significant difference. For example, if there is a B then the result is significantly higher than the corresponding result in column B.*



**Exhibit 2.2.1.b Product related concerns by Total, Respondent Type, Health Condition, House Age**

	Total (A)	Respondent Type					Health Condition		House Age		
		Gen Pop (U)	Pregnan t (V)	Parent (W)	New- comer (X)	Senior (Y)	Yes (b)	No (c)	< 1976 (j)	1976 -1989 (k)	1990+ (l)
<b>Base = actual</b>	<b>2187</b>	<b>1502</b>	<b>190</b>	<b>153</b>	<b>190</b>	<b>152</b>	<b>664</b>	<b>1401</b>	<b>571</b>	<b>518</b>	<b>808</b>
Pesticides, herbicides, insecticides	74	73	77	85U	65	86U	81c	72	81l	76	72
Lead contained in paint	69	69X	73	73	53	83U	78c	66	80kl	69	65
Household chemicals such as kitchen and bathroom cleaners	60	58	69U	75U	59	69U	67c	58	68l	61	57
Turpentine, paint, paint strippers/thinners	60	59X	65	67	43	75U	70c	56	72kl	61	54
Building materials such as adhesives, sealants or insulation products	50	47	52	63U	46	71U	58c	46	58kl	48	48
Home fragrance products such as scented candles, room sprays or air fresheners	36	35	38	38	31	48U	44c	32	44kl	33	34
Personal care products such as cosmetics or hair products	28	27	31	32	26	31	33c	25	34kl	25	27
Composite wood products such as plywood, particle board or medium-density fibreboard	24	23	23	19	24	34U	28c	21	27	23	23
Materials used in hobbies or craft projects	24	24	17	28	19	34U	33c	20	33kl	22	22
Natural health products such as herbal remedies, vitamins and minerals, probiotics	15	14	14	17	18	16	18c	13	18	14	14
None of the above	11	13V	6	7	11	8	6	13b	8	9	12

*QPThreat: Product Threats. Which of the following products, if any, do you think could pose health risks to you and your family?*

*Note: Letters denote statistically significant difference. For example, if there is a B then the result is significantly higher than the corresponding result in column B.*

### 2.2.2. Environment related concerns

Canadians identified most common environmental threats as health risks, including cigarette smoke (77%), carbon monoxide (77%), mould/humidity (72%), asbestos (70%), radon gas (64%), and radiation (64%). Close to half also identify cannabis smoke (51%), putting batteries/lightbulbs/chemical products in the garbage (49%), or flushing/throwing out pharmaceuticals and medications as health risks (46%). Fewer are concerned about wood smoke (39%) or single use plastics (34%), while environmental risks like indoor air (23%), outdoor air (18%), drinking water (16%), or soil (11%) rank lowest among health concerns. While this list is not directly comparable to 2017 results, it does appear that Canadians' concerns about carbon monoxide and cigarette smoke have increased since the last wave of research (41-44% considered a health risk in 2017).

As outlined in Exhibit 2.2.2.a and Exhibit 2.2.2.b below, a number of demographic factors are related to concerns about environmental health risks:

- Younger Canadians (18-34) are least likely to be concerned about almost all environmental health risks;
- Those with health conditions are more concerned than those without about all environmental health risks;
- Newcomers to Canada are less likely to be concerned about the risks of cigarette smoke (67% vs. 76% among gen pop), carbon monoxide (64% vs. 76%), radon gas (53% vs. 63%), asbestos (51% vs. 71%), mould/humidity (49% vs. 72%), or flushing/throwing out pharmaceuticals and medications (30% vs. 47%);
- Parents or guardians of children six and under are more likely than the general population to be concerned about the environmental health risks of cigarette smoke (89% vs. 76%), carbon monoxide (88% vs. 76%), or mould/humidity (82% vs. 72%); and
- Canadians who own a home built prior to 1976 tend to be more concerned about asbestos (83% vs. 66-71%) as are those who have renovated their home (75% vs. 56%).

**Exhibit 2.2.2.a Environmental related concerns by Total, Age, Gender, Respondent Type**

	Total (A)	Age			Respondent Type				
		18-34 (B)	35-54 (C)	55+ (D)	Gen Pop (U)	Pregnant (V)	Parent (W)	New- comer (X)	Senior (Y)
<b>Base = actual</b>	<b>2187</b>	<b>732</b>	<b>767</b>	<b>688</b>	<b>1502</b>	<b>190</b>	<b>153</b>	<b>190</b>	<b>152</b>
Carbon monoxide	77	66	74B	87BC	76X	81	88U	64	90U
Cigarette smoke	77	70	75	84BC	76X	8X	89U	67	87U
Mould/humidity	72	55	71B	84BC	72X	80	82U	49	84U
Asbestos	70	51	69B	85BC	71X	71	75	51	82U
Radiation (including electromagnetic radiation)	64	57	60	71BC	62	72	71	62	70
Radon gas	64	50	59B	78BC	63X	62	65	53	78UX
Cannabis smoke	51	43	49	58BC	50	53	56	51	55
Putting batteries, light bulbs or household chemical products in the garbage	49	36	42	64BC	49	42	57	40	59U
Flush or throw out pharmaceuticals or medications (prescription or over-the-counter)	46	33	38	62BC	47X	41	50	30	59U
Wood smoke	39	34	34	47BC	38	28	34	43	50U
Single-use plastics	34	32	32	38	34	37	35	31	37
Indoor air	23	15	24B	27B	23	15	24	16	28
Outdoor air	18	15	18	21B	19	13	15	15	17
Drinking water	16	12	17	18B	16	11	18	13	19
Soil from your garden or lawn	11	10	12	12	11	12	9	10	15
None of the above	5	5	6	4	5	4	1	7	4

QETHreat: Environmental Threat. Which of the following, if any, do you think could pose health risks to you and your family?

Note: Letters denote statistically significant difference. For example, if there is a B then the result is significantly higher than the corresponding result in column B.

**Exhibit 2.2.2.b Environmental related concerns by Total, Health Condition, House Age, Reno**

	Total (A)	Health Condition		House Age			Reno			
		Yes (b)	No (c)	<1976 (j)	1976- 1989 (k)	1990+ (l)	5 Yrs or less (m)	> 5 Yrs (n)	No (o)	Yes (p)
<b>Base = actual</b>		<b>664</b>	<b>1401</b>	<b>571</b>	<b>518</b>	<b>808</b>	<b>1322</b>	<b>511</b>	<b>354</b>	<b>1833</b>
Carbon monoxide	77	82c	76	84l	80	75	78o	84 mop	67	80mo
Cigarette smoke	77	80	76	83k	75	77	77o	84 mop	68	79mo
Mould/humidity	72	80c	69	84kl	70	68	73o	81 mop	57	75mo
Asbestos	70	76c	68	83kl	71	66	69o	82mop	56	73mo
Radiation (including electromagnetic radiation)	64	70c	61	69	64	62	66o	69o	50	67o
Radon gas	64	68c	62	73kl	64	63	65o	70o	52	67o
Cannabis smoke	51	51	51	51	51	52	51o	55o	44	53o
Putting batteries, light bulbs or household chemical products in the garbage	49	56c	47	58kl	50	46	51o	57o	34	53mo
Flush or throw out pharmaceuticals or medications (prescription or over- the-counter)	46	53c	44	54l	48	46	49o	54o	29	50o
Wood smoke	39	44c	37	42	40	38	40o	44o	28	41o
Single-use plastics	34	41c	32	36	37	35	37o	37o	23	37o
Indoor air	23	27c	20	26l	25	20	24	23	18	24
Outdoor air	18	22c	17	21	19	18	20o	19o	12	20o
Drinking water	16	20c	13	18	14	17	17	15	15	16
Soil from your garden or lawn	11	13c	11	14	12	11	14o	11	6	13o
None of the above	5	2	6	3	5	6	3	3	12	3

*QEThreat: Environmental Threat. Which of the following, if any, do you think could pose health risks to you and your family?*

*Note: Letters denote statistically significant difference. For example, if there is a B then the result is significantly higher than the corresponding result in column B.*

### 2.2.3. Chemical related concerns

Canadians are better able to recognize the health risks of chemicals found in products than in previous years. Most identify lead (72%), mercury (71%), and formaldehyde (59%) as health risks. While not directly comparable due to different product lists, fewer (39-55%) identified these chemicals as a health risk in 2017.

Between one-third and one-half of Canadians are concerned about other household chemicals, including:

- Benzene (47%);
- Bisphenol A (43%);
- Boric acid (43%);
- Flame retardants (41%);
- Phthalates (35%);
- Aluminum (32%);
- Talc (31%); and
- Triclosan (31%).

As outlined in Exhibit 2.2.3.a and Exhibit 2.2.3.b, the following demographic factors are related to concerns about health risks of chemical products:

- Younger Canadians (18-34) are least concerned about the health risks of almost all chemicals;
- Quebecers are least concerned about the health risks of most chemicals;
- Women are more concerned than men about the health impacts of most chemicals, including lead (75% vs. 70%), formaldehyde (62% vs. 56%), Bisphenol A (48% vs. 39%), phthalates (39% vs. 31%), aluminum (38% vs. 26%), triclosan (35% vs. 27%), and talc (34% vs. 26%).
- Newcomers to Canada are less concerned about the health risks of chemicals than the general population;
- Those with a health condition are more concerned about the health risks of chemicals than the general population; and
- Those who have completed home renovations are more concerned overall about the health risks of household chemicals (8% say concerned about none of the above vs. 23% among those who have not completed renovations). This is presumably because these homeowners have come into contact with these chemicals during the course of renovations.

**Exhibit 2.2.3.a Chemical related concerns by Total, Age, Gender, Region**

	Total (A)	Age			Gender		Region				
		18-34 (B)	35-54 (C)	55+ (D)	Male (E)	Female (F)	Atlantic (G)	Quebec (H)	Ontario (I)	Prairies (J)	BC (K)
<b>Base = actual</b>	<b>2187</b>	<b>732</b>	<b>767</b>	<b>688</b>	<b>937</b>	<b>1237</b>	<b>152</b>	<b>480</b>	<b>874</b>	<b>417</b>	<b>264</b>
Lead	72	58	71B	84BC	70	75E	76	72	73	67	78J
Mercury	71	61	69B	81BC	71	72	77	68	71	72	73
Formaldehyde	59	42	56B	73BC	56	62E	68H	46	61H	62H	63H
Benzene	47	34	47B	57BC	48	47	46	42	53HJ	42	47
Boric Acid (borax, boron or borate)	43	41	49BD	40	43	44	52H	38	45H	45	40
Bisphenol A (BPA)	43	33	46B	49B	39	48E	42	35	48HJ	40	48H
Flame retardants	41	37	39	46BC	40	43	53H	29	47H	40H	43H
Phthalates	35	30	36B	38B	31	39E	41H	28	39H	34	35
Aluminum	32	28	35B	34	26	38E	36	29	35	32	30
Talc	31	29	28	34	26	34E	34H	21	36H	29H	32H
Triclosan	31	24	34B	34B	27	35E	37H	25	34H	30	32
None of the above	11	14D	13D	7	12	9	9	13	9	12	10

*QCThreat: Chemical Threat. Which of the following chemicals, if any, do you think could pose risks to you and your family?*

*Note: Letters denote statistically significant difference. For example, if there is a B then the result is significantly higher than the corresponding result in column B.*

**Exhibit 2.2.3.b Chemical related concerns by Total, Respondent Type, Health Condition, Reno**

	Total (A)	Respondent Type					Health Condition		Reno			
		Gen Pop (U)	Pregna nt (V)	Parent (W)	New- comer (X)	Senior (Y)	Yes (b)	No (c)	5 Yrs or less (m)	> 5 Yrs (n)	No (o)	Yes (p)
<b>Base = actual</b>	<b>2187</b>	<b>1502</b>	<b>190</b>	<b>153</b>	<b>190</b>	<b>152</b>	<b>664</b>	<b>1401</b>	<b>1322</b>	<b>511</b>	<b>354</b>	<b>1833</b>
Lead	72	73X	77	77	49	85U	79c	70	73o	81mop	59	75o
Mercury	71	70X	75	79	62	80U	78c	69	73o	76o	60	74o
Formaldehyde	59	59X	64	56	43	74U	66c	55	59o	67mop	48	61mo
Benzene	47	48	47	46	44	51	52c	46	48o	53o	37	50o
Boric Acid (borax, boron or borate)	43	43	52	50	44	38	47C	41	45	42	40	44
Bisphenol A (BPA)	43	42	47	53	39	52	49c	41	44o	49o	34	46o
Flame retardants	41	40	48	48	37	52U	47C	39	43o	45o	31	44o
Phthalates	35	35	41	38	33	36	41c	32	35o	40o	27	37o
Aluminum	32	30	45U	46U	31	38	36	31	34o	35o	26	34o
Talc	31	30	35	35	28	35	35c	29	31o	35o	23	32o
Triclosan	31	31	36	35	27	32	35	29	32o	36o	22	33o
None of the above	11	12	11	6	10	8	6	12b	8	8	23mnp	8

*QCThreat: Chemical Threat. Which of the following chemicals, if any, do you think could pose risks to you and your family?*

*Note: Letters denote statistically significant difference. For example, if there is a B then the result is significantly higher than the corresponding result in column B.*

#### 2.2.4. Most common environmental health concerns among Canadians

The most pressing environmental health concerns vary widely among Canadians. Carbon monoxide is listed most often as a primary health risk (17%), while mould/humidity is listed second (11%), and cigarette smoke third (9%).

Primary concerns do not vary widely by demographic, with virtually every group selecting carbon monoxide or humidity/mould most often. Full details are outlined in Exhibit 2.2.4.a below.

##### Exhibit 2.2.4.a Primary Concern by Total

	Primary Concern
	Total
<b>Base = actual</b>	<b>2187</b>
Carbon monoxide	17
Mould/humidity	11
Cigarette smoke	9
Pesticides, herbicides, insecticides	8
Asbestos	8
Radiation (including electromagnetic radiation)	4
Cannabis smoke	4
Mercury	4
Lead	4
Household chemicals such as kitchen and bathroom cleaners	3
Radon gas	3
Lead contained in paint	2
Flush or throw out pharmaceuticals or medications (prescription or over-the-counter)	2
Drinking water	2
Single-use plastics	2
Personal care products such as cosmetics or hair products	1
Home fragrance products such as scented candles, room sprays or air fresheners	1
Building materials such as adhesives, sealants or insulation products	1
Outdoor air	1
Indoor air	1
Putting batteries, light bulbs or household chemical products in the garbage	1
Wood smoke	1
Boric Acid (borax, boron or borate)	1



Flame retardants	1
Formaldehyde	1
Benzene	1
Bisphenol A (BPA)	1
Aluminum	*
Composite wood products such as plywood, particle board or medium-density fibreboard	*
Materials used in hobbies or craft projects	*
Natural health products such as herbal remedies, vitamins and minerals, probiotics	*
Phthalates	*
Soil from your garden or lawn	*
Talc	*
Triclosan	*
Turpentine, paint, paint strippers/thinners	*
Not Asked	5

*QmostConR1. Most Concerned: Which of the following are you most concerned with?*

*Note: Letters denote statistically significant difference. For example, if there is a B then the result is significantly higher than the corresponding result in column B.*

*\* Denotes less than 1%*

*- Denotes 0*

## 2.3. Personal Care Products

### 2.3.1. Ingredient review

More than half of Canadians (58%) are interested in the ingredients found in their personal care products. Among these, 43% say they check the ingredient list, while 30% say they avoid specific ingredients. As outlined in Exhibit 2.3.1.a, age plays a role in checking the safety of personal products. However, unlike general concerns about health risks, younger Canadians (18-34) are more likely to read ingredients lists (51% vs. 36-44% among those 35+) and to avoid specific ingredients (35% vs. 25-31%).

Interestingly, despite lower concerns about health risks than the general population, newcomers to Canada are also more likely to read ingredient lists (60% vs. 40% among gen pop) and avoid specific ingredients (39% vs. 29%). Pregnant people also report being more likely to read ingredient lists than the general population (51% vs. 40%).

**Exhibit 2.3.1.a Ingredient review by Total, Age, Respondent Type**

	Total (A)	Age			Respondent type				
		18-34 (B)	35-54 (C)	55+ (D)	Gen Pop (U)	Pregnant (V)	Parent (W)	New- comer (X)	Senior (Y)
<b>Base = actual</b>	<b>2187</b>	<b>732</b>	<b>767</b>	<b>688</b>	<b>1502</b>	<b>190</b>	<b>153</b>	<b>190</b>	<b>152</b>
Read the ingredients list	43	51CD	44D	36	40	51U	48	60U	38
Avoid products with specific ingredients	30	35D	31D	25	29	36	35	39U	21
None of the above	42	30	40B	51BC	44VWX	30	31	20	53

*QPerProd: Personal Care Products. When purchasing personal care products such as shampoo, deodorants, cosmetics, or hand soaps do you...?*

*Note: Letters denote statistically significant difference. For example, if there is a B then the result is significantly higher than the corresponding result in column B.*

### 2.3.2. Ingredient avoidance

Among those who check or avoid specific ingredients in their personal care products, the most common ingredients of concern are formaldehyde (48%) and aluminum (43%). Other ingredients of concern include:

- Sulfates (40%);
- Parabens (39%);
- Acetone (35%);
- Fragrance (28%);
- Petrolatum (26%);
- Talc (25%);
- Salicylic Acid (19%);
- Dimethicone (19%);
- Triclosan (19%);
- PFAS (18%);
- Glycerin (13%); or
- Essential oils (8%).

Not unexpectedly given other results from this study, those 55+ are more concerned about most ingredients. Thus, while younger Canadians may be more mindful of checking ingredients, they may not know exactly which ingredients may pose serious health risks.

**Exhibit 2.3.2.a Ingredient avoidance by Total, Age**

	Total (A)	Age		
		18-34 (B)	35-54 (C)	55+ (D)
<b>Base = Those who check/avoid ingredients</b>	<b>1,327</b>	<b>520</b>	<b>467</b>	<b>340</b>
Formaldehyde	48	33	43B	70BC
Aluminum	43	34	41	53BC
Sulfates	40	39	36	43
Parabens	39	36	41	41
Acetone	35	26	30	48BC
Fragrance	28	21	23	39BC
Petrolatum	26	22	25	30B
Talc	25	18	22	35BC
Salicylic Acid	19	16	20	19
Triclosan	19	14	21B	24B
Dimethicone	19	17	16	23
PFAS	18	14	18	23B
Glycerin	13	12	14	12
Essential oils	8	12D	8	5
Always look for organic/natural products	1	*	1	1
Don't know	*	-	1	*
None/Nothing/NA/Refused	9	11D	11D	4

*QIngr: Ingredients. Which of the following ingredients, if any, do you try to avoid when purchasing personal care products?*

*Note: Letters denote statistically significant difference. For example, if there is a B then the result is significantly higher than the corresponding result in column B.*

*\* Denotes less than 1%*

*- Denotes 0*

## 2.4. Cleaning Behaviours

### 2.4.1. Home cleaning behaviours

When cleaning their homes, Canadians generally say they follow most safety precautions. In particular, the majority say they:

- Wash their hands after using a household chemical product (87% always or usually do);
- Use a mattress or pillow cover (85%);
- Remove outdoor shoes inside the house (84%);
- Clean floors and surfaces with a wet cloth (77%);
- Follow the instructions on household chemical labels (74%);
- Keep household chemicals out of reach and sight of young children (70%);
- Ensure proper ventilation (68%); and/or
- Wash bedding on a weekly basis (59%).

Half of Canadians say they usually or always choose low VOC cleaning products (50%), regularly check containers for leaks or damage (48%), or use a vacuum with a HEPA filter (46%).

Of note, one-in-ten say they always (7%) or usually (7%) mix household chemical products together, which suggests a sizeable minority of Canadians are engaging in potentially hazardous practices. Those who say they usually or always mix chemical products tend to be younger Canadians (17-22% among those 18-54 vs. 4% among those 55+). Newcomers to Canada are also significantly more likely to engage in mixing chemical products than the general population (27% vs. 13%). Full details are outlined in Exhibit 2.4.1.a.

**Exhibit 2.4.1.a Home cleaning behaviours by Total, Age, Respondent Type**

TOP 2 BOX ALWAYS/USUALLY (NET)	Total (A)	Age			Respondent Type				
		18-34 (B)	35-54 (C)	55+ (D)	Gen Pop (U)	Pregnant (V)	Parent (W)	New- comer (X)	Senior (Y)
<b>Base = actual</b>	<b>2187</b>	<b>732</b>	<b>767</b>	<b>688</b>	<b>1502</b>	<b>190</b>	<b>153</b>	<b>190</b>	<b>152</b>
Wash your hands with soap and water after using a household chemical product	87	83	87	89B	86	88	91	87	89
Use a mattress or pillow cover on your bed	85	82	83	89BC	84	84	89	83	91
Remove your outdoor shoes when inside the home	84	82	86	84	83	82	87	86	88
Clean floors and household surfaces with a wet cloth or mop	77	74	75	80	75	76	77	85U	85U
Follow the instructions on the label every time you use a household cleaner	74	70	73	78	74	66	75	75	79
Keep household chemical products out of reach and sight of young children	70	71	70	68	66	83UY	89UY	84UY	64
Ensure proper ventilation by opening windows or doors and running exhaust fans, during and after using the product	68	68	71	67	67	79U	75	71	71
Wash bedding on a weekly basis	59	58	57	62	58	57	59	66	67
Use protective equipment such as goggles and rubber gloves as required	58	59	56	59	57	60	59	63	63
Choose Low VOC Cleaning Products, That Is, Products That Release Less Odour Or Off-gas Less	50	50	47	51	49	50	45	55	54
Regularly check chemical product containers for leaks or damage	48	53	46	47	47	47	52	59U	50
Use a vacuum with a hepa filter	46	49	46	43	46	48	40	48	46
Replace your furnace filter approximately every three months	43	43	44	43	43	41	50	43	40
Mix household chemical products together	13	22CD	17D	4	13Y	14Y	11Y	27UVWY	1

QCInHome: Cleaning Home. When cleaning your home, how often do you do the following?

Note: Letters denote statistically significant difference. For example, if there is a B then the result is significantly higher than the corresponding result in column B.

## **2.5. Food Safety**

### **2.5.1. Preparation, cooking and food storage behaviours**

Most Canadians appear to take steps to keep harmful chemicals out of their food. The majority say they discard single use-plastic containers (79%), look for a “microwave safe” label on containers before microwaving (74% always or usually do), or store food in food-grade containers (62%). Many also say they use their range hood when cooking (60%) and let the tap run cold before drinking water (57%). However, a sizeable number say they always or usually store foods in single-use plastics (36%), heat foods in single-use plastics (19%), or pour hot liquids into single-use plastics (18%).

As outlined in Exhibits 2.5.1.a, women and older Canadians (55+) are less likely to report behaviours that may risk food safety. Conversely, newcomers to Canada are more likely than the general population to say they always or usually heat food in single-use containers (30% vs. 19%) or pour hot liquids into single-use containers (27% vs. 17%).

**Exhibit 2.5.1.a Preparation, cooking and food storage behaviours by Total, Age, Gender, Respondent Type**

TOP 2 BOX ALWAYS/USUALLY (NET)	Total (A)	Age			Gender		Respondent Type				
		18-34 (B)	35-54 (C)	55+ (D)	Male (E)	Female (F)	Gen Pop (U)	Pregnant (V)	Parent (W)	New- comer (X)	Senior (Y)
<b>Base = actual</b>	<b>2817</b>	<b>732</b>	<b>767</b>	<b>688</b>	<b>937</b>	<b>1237</b>	<b>1502</b>	<b>190</b>	<b>153</b>	<b>190</b>	<b>152</b>
Discard or recycle stained, chipped or cracked plastics and containers	79	71	76	87BC	78	80	79V	70	76	75	88UVWX
Look For A "microwave Safe" Label On Glass, Ceramic And Plastic Containers Before Putting In The Microwave	74	71	71	79BC	71	78E	73	77	78	74	78
Store Food In Food-grade Containers, Such As Glass Or Stainless Steel	62	64	60	62	61	63	61	66	67	65	58
Use your range hood when cooking	60	60	60	60	59	61	58	65	66	63	61
Let your taps run until the water is cold before drinking, cooking or making baby food	57	55	60	57	58	56	56	61	61	57	63
Store Foods In Plastic Single-use Containers Such As Margarine Or Yogurt Tubs	36	45CD	38D	29	40F	33	36	39	34	43	30
Heat Food In Plastic Single-use Containers, Such As Margarine Or Yogurt Tubs, Styrofoam Take-out Containers, Etc.	19	29CD	22D	10	23F	15	19Y	19Y	18Y	30UY	7
Pour hot liquids into plastic containers, such as margarine or yogurt containers	18	27D	21D	8	22F	14	17Y	19Y	18	27UY	9

*QFood: Food Safety. When preparing, cooking and/or storing food, how often do you do the following?*

*Note: Letters denote statistically significant difference. For example, if there is a B then the result is significantly higher than the corresponding result in column B.*



## 2.6. Renovation Behaviours

### 2.6.1. Recent Renovations among Canadians

Most (81%) Canadians have completed interior renovations in their home, defined as minor projects like painting furniture or walls to more major projects like finishing a basement. Of these, there was an even distribution between renovations completed in the past 12 months (29%), past five years (26%), or more than five years ago (26%).

Not unexpectedly, those undergoing life change are more likely to have completed renovations in the past 12 months. Newcomers to Canada (40%) and pregnant people (41%) are more likely to have recently renovated than the general population (28%). See Exhibit 2.6.1.a for full details.

**Exhibit 2.6.1.a Recent renovations among Canadians by Total, Respondent Type**

	Total (A)	Respondent type				
		Gen Pop (U)	Pregnant (V)	Parent (W)	New-comer (X)	Senior (Y)
<b>Base = actual</b>	<b>2187</b>	<b>1502</b>	<b>190</b>	<b>153</b>	<b>190</b>	<b>152</b>
In the past twelve months	29	28	41U	34	40U	18
In the past five years	26	25	27	29	26	34
More than five years ago	26	28VWX	17	17	12	34
Never	19	19	15	20	22	13

*QLastReno: Last time renovation was completed. When was the last time, if ever, interior renovations were completed in your home, by you or someone else? This could include minor projects such as painting furniture or walls to more major projects such as finishing a basement.*

*Note: Letters denote statistically significant difference. For example, if there is a B then the result is significantly higher than the corresponding result in column B.*

### 2.6.2. Renovation behaviours

Most Canadians report taking safety measures when it comes to home renovations. As outlined in Exhibit 2.6.2.a, those who have renovated their house in the past five years say they usually or always:

- Keep work areas well ventilated (78%);
- Keep vulnerable people away from worksites (67%);
- Wear protective gear (64%);
- Ventilate when using composite products (64%); and/or
- Use low emission products (55%).

However, only one third say they always or usually consult a professional before removing asbestos (35%) or test for lead-based paint before removing or stripping paint from walls (31%). Unexpectedly, as outlined in Exhibits 2.6.2.a, Canadians who own a home built prior to 1976 are the least likely to say they always or usually consult a professional about testing or removing asbestos (26% vs. 36-41% among those who own a home built after 1976). Similarly, those who own homes built prior to 1976 are less

likely to consult a professional about lead paint (24% vs. 35%). These results are of concern given that asbestos was used in home construction prior to 1990 while homes built before 1991 may have used lead paint. Consequently, this suggests a significant number of Canadians are potentially putting their health at risk during renovations.

A number of other demographic variables are related to the adherence to safe renovation practices. In particular:

- Older Canadians (55+) are more likely to say they follow safe renovation practices than those 18-54;
- Those in Quebec are less likely to say they always or usually follow most safety measures; and
- Newcomers to Canada and parents of children six and under are more likely than the general population to follow most safety measures.

Full details can be found in the appendix.

**Exhibit 2.6.2.a Renovation behaviours**

TOP 2 BOX ALWAYS/USUALLY (NET)	Total (A)	Age			Respondent Type					House Age		
		18-34 (B)	35-54 (C)	55+ (D)	Gen Pop (U)	Preg- nant (V)	Par- ent (W)	New- comer (X)	Senio- r (Y)	< 1976 (j)	1976 -1989 (k)	1990+ (l)
<b>Base = actual</b>	<b>1322</b>	<b>484</b>	<b>461</b>	<b>377</b>	<b>872</b>	<b>135</b>	<b>107</b>	<b>126</b>	<b>82</b>	<b>335</b>	<b>348</b>	<b>510</b>
Keep your work areas well ventilated, let in fresh, clean air	78	79	80	76	77	85	89U	75	83	77	83	76
Keep vulnerable people such as children, pregnant people and seniors away from the worksite or room under renovation	67	76D	74D	54	65	80UY	82UY	77UY	57	65	68	67
Wear Protective Gear Such As Gloves, A Mask, And/or Safety Glasses	64	70D	67D	55	63	72Y	68	76UY	49	61	68	64
Ventilate (open A Window Or Turn On An Exhaust Fan) When Using Composite Wood Products Such As Plywood, Particle Board Or Medium-density Fibreboard	64	73D	67D	54	61	71	69	80UY	58	62	65	66
Use Low-emission Products Such As Low Volatile Organic Compounds (VOC) Paint Or Adhesives	55	57	53	54	54	56	57	51	63	54	60	56
Consult a professional to test or remove asbestos	35	50CD	41D	16	33Y	48UY	45Y	50UY	16	26	41j	36j
Test For Lead-based Paint Before Removing Or Stripping Paint From The Walls	31	46CD	35D	14	31Y	32Y	34Y	48UY	8	24	35j	35j

*QRENOBEH: Renovation Behaviours. To what extent did you do each of the following during your renovations?*

*Note: Letters denote statistically significant difference. For example, if there is a B then the result is significantly higher than the corresponding result in column B.*

## 2.7. Environmental Health Behaviours

### 2.7.1. Testing behaviours

When it comes to preventative measures, many Canadians do not appear to be engaging in environmental health testing, such as lead, radon or asbestos. Few Canadians are testing their drinking water, with just over one-in-ten saying they tested their water for potential contaminants (15%) or lead (13%). Even fewer (9%) say they have tested for radon in their homes. This is slightly above the number who reported testing their homes for radon in 2017 (5%).

As outlined in Exhibit 2.7.1.a and 2.7.1.b, a number of demographic variables are related to environmental testing, specifically:

- Those 18-34 are more likely than Canadians 35+ to test their water for contaminants (20% vs. 11-14%) or lead (19% vs. 10-14%);
- Newcomers are more likely to test for lead in their water (23% vs. 13% among gen pop) or house paint (14% vs. 7%);
- Those in Ontario are more likely than those in other provinces to engage in testing of environmental contaminants.

**Exhibit 2.7.1.a Renovation behaviours for Total, Age, Region**

	Age				Region				
	Total (A)	18-34 (B)	35-54 (C)	55+ (D)	Atlantic (G)	Quebec (H)	Ontario (I)	Prairies (J)	BC (K)
<b>Base = actual</b>	<b>2187</b>	<b>732</b>	<b>767</b>	<b>688</b>	<b>152</b>	<b>480</b>	<b>874</b>	<b>417</b>	<b>264</b>
Tested your water for other potential contaminants	15	20CD	14	11	25HJK	12	18HJK	11	9
Tested for lead in your drinking water	13	19CD	14	10	20HJ	11	16HJ	10	11
Tested for radon in your home	9	12C	7	10	10	9	10	9	10
Tested the paint in your house for lead	7	14CD	5	4	8	3	10HJ	5	7

*QOTHER: Have you ever done any of the following?*

*Note: Letters denote statistically significant difference. For example, if there is a B then the result is significantly higher than the corresponding result in column B.*

### Exhibit 2.7.1.a Renovation behaviours for Respondent Type

	Respondent Type					
	Total (A)	Gen Pop (U)	Pregnant (V)	Parent (W)	New-comer (X)	Senior (Y)
<b>Base = actual</b>	<b>2187</b>	<b>1502</b>	<b>190</b>	<b>153</b>	<b>190</b>	<b>152</b>
Tested your water for other potential contaminants	15	14	22U	15	24U	11
Tested for lead in your drinking water	13	13	19	13	23U	9
Tested for radon in your home	9	9	10	8	11	10
Tested the paint in your house for lead	7	7	10	7	14U	3

QRENOBEH: Renovation Behaviours. To what extent did you do each of the following during your renovations?

Note: Letters denote statistically significant difference. For example, if there is a B then the result is significantly higher than the corresponding result in column B.

#### 2.7.2. Inspection and monitoring behaviours

In terms of inspection and monitoring behaviours, Canadians generally take more steps than they do for environmental health testing; however, uptake remains low. One-quarter complete annual inspections for their furnace (27%), air conditioner (23%), hot water heater (19%), or gas or wood fireplace (17%).

When it comes to air quality, only 18 per cent say they check the Air Quality Health Index regularly during heatwaves.

As outlined in Exhibit 2.7.2.a, age is a factor in inspection and monitoring behaviours; however, unlike with testing behaviours, older Canadians generally report taking more action. Those 55+ are more likely to have their furnace (35% vs. 22-23%), air conditioner (27% vs. 18-23%), and gas or wood fireplace serviced annually (20% vs. 14-17%).

Other demographic factors related to inspections include:

- Those with lower incomes (<\$60k) are less likely than those in middle- or higher-income households (\$60k+) to say they conduct annual inspections, suggesting cost is likely a factor; and
- Those living in Ontario are more likely than those in other provinces to undertake most inspection and monitoring steps.

**Exhibit 2.7.2.a Inspection and monitoring behaviours by Total, Age, Region, Income**

	Total (A)	Age			Region					Income			
		18-34 (B)	35-54 (C)	55+ (D)	Atlan- tic (G)	Queb- ec (H)	Ontar- io (I)	Prairi- es (J)	BC (K)	< \$60K (L)	\$60-< 100K (M)	\$100- < 150K (N)	\$150 K+ (O)
<b>Base = actual</b>	<b>2187</b>	<b>732</b>	<b>767</b>	<b>688</b>	<b>152</b>	<b>480</b>	<b>874</b>	<b>417</b>	<b>264</b>	<b>862</b>	<b>636</b>	<b>342</b>	<b>192</b>
Have your furnace inspected annually	27	22	23	35BC	23H	8	38GHK	32HK	22H	25	31L	37L	38L
Have your air conditioning inspected annually	23	23	18	27C	14	23JK	32GHJ K	13	14	21	28L	27L	33L
Have your water heater inspected annually	19	23D	18	17	18	17	23HJ	15	19	18	21	25L	23
Regularly check the Air Quality Health Index during heat waves	18	22C	15	19	12	10	23GH	18H	22H	17	21	18	27LN
Have your gas or wood fireplace services or inspected annually	17	17	14	20C	10	20	19	15	17	16	21L	19	27L

*QOTHER: Have you ever done any of the following?*

*Note: Letters denote statistically significant difference. For example, if there is a B then the result is significantly higher than the corresponding result in column B.*

## 2.8. Protective Behaviours

### 2.8.1. Behaviours that reduce risk

Over half of Canadians say they always or usually engage in healthy home behaviours, including keeping indoor moisture and humidity levels low (74%), disposing of chemical products according to municipal guidelines (69%), turning on exhaust fans or opening windows when showering (65%), cleaning mould with water and dish soap (62%), and taking unused pharmaceuticals to a pharmacy for disposal (54%). See Exhibit 2.8.1.a for full details.

As outlined in Exhibit 2.8.1.a, older Canadians (55+) are more likely than their 18-54 counterparts to bring pharmaceuticals to a pharmacy for disposal (67% vs. 44-48%). Vulnerable groups are on par with the general population for most risk reduction behaviours; however, pregnant people, parents, and newcomers are less likely to say they take unused pharmaceuticals to a pharmacy for disposal (35-43% vs. 56%), which may signal that these groups could benefit from greater knowledge about this topic.

**Exhibit 2.8.1.a Behaviours that reduce risk by Total, Age, Respondent Type**

TOP 2 BOX ALWAYS/USUALLY (NET)	Age				Respondent Type				
	Total (A)	18-34 (B)	35-54 (C)	55+ (D)	Gen Pop (U)	Pregnant (V)	Parent (W)	New- comer (X)	Senior (Y)
<b>Base = actual</b>	<b>2187</b>	<b>732</b>	<b>767</b>	<b>688</b>	<b>1502</b>	<b>190</b>	<b>153</b>	<b>190</b>	<b>152</b>
Keep indoor moisture and humidity levels low to prevent mould	74	70	70	79BC	73	76	69	71	84UWX
Dispose of chemical products using municipal guidelines	69	66	63	77BC	69	66	66	64	80 UVWX
Turn on exhaust fans or open a window while showering	65	69D	67	62	64	79U	69	68	67
Clean up small amounts of mould with water and dish soap	62	63	62	62	61	69	70	67	61
Take Unused Pharmaceuticals To A Pharmacy For Disposal (both Prescription And Over-the-counter)	54	48	44	67BC	56VWX	35	36	43	74 UVWX

QBPMessage: Protective Behaviours Priority Messaging

Note: Letters denote statistically significant difference. For example, if there is a B then the result is significantly higher than the corresponding result in column B.

## 2.8.2. Carbon monoxide alarm in home and location

Despite carbon monoxide being the number one safety concern of Canadians, less than half (47%) have installed a carbon monoxide alarm in their home. This also marks a decrease from 2016, when over half (57%) said they had a carbon monoxide detector in their home.

Demographics are a factor in likelihood to install a carbon monoxide alarm. As outlined in Exhibits 2.8.2.a and 2.8.2.b, groups that are less likely to have installed an alarm include:

- Younger and middle-aged Canadians (18-54; 37-43% vs. 58% among those 55+);
- Newcomers (34% vs. 47% among gen pop); and
- Quebeckers (25% vs. 36-62% in other provinces).

### Exhibit 2.8.2.a Carbon monoxide alarm in home by Total, Age, Region

	Total (A)	Age			Region				
		18-34 (B)	35-54 (C)	55+ (D)	Atlantic (G)	Quebec (H)	Ontario (I)	Prairies (J)	BC (K)
<b>Base = actual</b>	<b>2187</b>	<b>732</b>	<b>767</b>	<b>688</b>	<b>152</b>	<b>480</b>	<b>874</b>	<b>417</b>	<b>264</b>
Installed a carbon monoxide alarm in your home	47	37	43	58BC	36	25	62GHJK	51GH	43H

QOTHER: Other Environmental Health Behaviours: Have you ever done any of the following?

Note: Letters denote statistically significant difference. For example, if there is a B then the result is significantly higher than the corresponding result in column B.

### Exhibit 2.8.2.b Carbon monoxide alarm in home by Total, Respondent Type

	Total (A)	Respondent Type				
		Gen Pop (U)	Pregnant (V)	Parent (W)	New-comer (X)	Senior (Y)
<b>Base = actual</b>	<b>2187</b>	<b>1502</b>	<b>190</b>	<b>153</b>	<b>190</b>	<b>152</b>
Installed a carbon monoxide alarm in your home	47	47X	47	49	34	59U

QOTHER: Other Environmental Health Behaviours: Have you ever done any of the following?

Note: Letters denote statistically significant difference. For example, if there is a B then the result is significantly higher than the corresponding result in column B.

Among the 47 per cent of Canadians that have installed a carbon monoxide alarm in their home, the majority (57%) installed one in a hallway outside sleeping areas or the main floor of the home (50%). Fewer said they installed alarms beside a fuel burning appliance (29%), in a bedroom (16%), or in a



basement (4%). Full details are in Exhibit 2.8.2.c below. This is consistent with where Canadians said they placed carbon monoxide detectors in 2016.

**Exhibit 2.8.2.c Carbon monoxide alarm in location by Total**

	Total (A)
<b>Base = actual</b>	<b>2187</b>
In a hallway outside sleeping areas	57
On the main floor of the home	50
Beside a fuel burning appliance such as a furnace or water heater	29
In a bedroom	16
In basement (e.g. hallway, by stairwell, recroom etc.)	4
Each floor of the house has one/various spots throughout the house	1
Garage/next to the garage	1

QCODet: *Where is your carbon monoxide alarm located in your home?*

*Note: Only responses >1% mentions shown. Letters denote statistically significant difference. For example, if there is a B then the result is significantly higher than the corresponding result in column B.*

## 2.9. Barriers and Motivators for Maintaining a Healthy Home

### 2.9.1. Barriers to maintaining a healthy home

Barriers to maintenance of a healthy home may include awareness of health hazards. Despite the low awareness of many health risks outlined in this report, one-third of Canadians say they have no barriers because they currently maintain a healthy home (33%). Many Canadians (30%) also feel they do not have control over issues because they are renters. These were also the most common responses in the 2016 research; however, while results are not directly comparable, the magnitude of those who feel confident in their ability to maintain a healthy home has decreased. This may be a function of Canadians now having greater awareness of various health risks.

Other barriers to maintaining a healthy home include:

- Cost (20%);
- Confusing, complicated or contradictory information (16%);
- Not knowing where to find reliable information (16%); or
- Not having enough time to address the issue (12%).

As outlined in Exhibit 2.9.1.a, a variety of demographic factors are related to awareness of health hazards. In particular:

- Younger and middle-aged Canadians (18-54) report more barriers than those 55+, including cost (25-26% vs. 12%), not knowing where to find reliable information (19-20% vs. 12%), being renters and not having control of the issue of concern (32-27% vs. 22%), or not having enough time (15-22% vs. 3%);
- Canadians who have a disability report more barriers than those without disabilities, including cost (25% vs. 19%), confusing information (19% vs. 13%), and being renters (40% vs. 27%); and
- Pregnant people report greater barriers of cost (30% vs. 20% among the general population) and not having enough time (21% vs. 12%).

### Exhibit 2.9.1.a Barriers to maintaining a healthy home by Total, Age, Respondent Type, Disability

	Total (A)	Age			Respondent Type					Disability	
		18-34 (B)	35-54 (C)	55+ (d)	Gen Pop (U)	Pregnant (V)	Parent (W)	New- comer (X)	Senior (Y)	Yes (Z)	No (a)
<b>Base = actual</b>	<b>2187</b>	<b>732</b>	<b>767</b>	<b>688</b>	<b>1502</b>	<b>190</b>	<b>153</b>	<b>190</b>	<b>152</b>	<b>317</b>	<b>1787</b>
I am currently able to maintain a healthy home	33	22	21	50BC	33X	24	26	19	56U	26	36Z
I rent my house /apartment, so I don't have control of the issue of concern	30	37D	32D	22	28	34	30	46U	25	40a	27
It costs too much to address the issue	20	25D	26D	12	20Y	30U	24	25	6	25a	19
The information available is confusing, complicated or contradictory	16	17	17	14	16	13	13	23	9	22a	14
I don't know where to find reliable information	16	20D	19D	12	16	20	17	23	11	18	16
Not enough time to address the issue	12	22CD	15D	3	12Y	21U	16	15	3	15	12
None of the above	8	8	12D	6	9X	9	10	3	3	3	9Z

QBarriers1: Barriers: Which of the following, if any, prevent you from maintaining a healthier home?

Note: Letters denote statistically significant difference. For example, if there is a B then the result is significantly higher than the corresponding result in column B.

#### 2.9.2. Motivation for maintaining a health home

When it comes to encouraging Canadians to maintain a healthier home, the majority cite personal health (61%) or the health of their family and children (51%). Other motivators include:

- Understanding/knowledge of the risks (44%);
- Easy and free ways to address risks (42%);
- Fear of illness due to unaddressed risk (38%);
- Environmental concerns (36%);
- Government funding to address expensive issues (32%); and
- Government incentives to address issues (29%).

When communicating with younger Canadians (18-34), personal health remains their primary motivator (57%), but they are also more likely than those 35+ to be motivated by better understanding of risks (48% vs. 40-44%) and environmental concerns (41% vs. 33-36%). Not unexpectedly, older Canadians (55+) are more motivated by personal health (68% vs. 57% among 18-54) and fear of illness due to unaddressed risk (43% vs. 35-37%).

**Exhibit 2.9.2.a Motivation for maintaining a healthy home by Total, Age**

	Total (A)	Age		
		18-34 (B)	35-54 (C)	55+ (D)
<b>Base = actual</b>	<b>2187</b>	<b>732</b>	<b>767</b>	<b>688</b>
Personal health	61	57	57	68BC
Health of my family/children	51	51	56D	46
Understanding/knowledge of the risks	44	48C	40	44
Easy and free ways to address risks	42	43	41	43
Fear of illness due to unaddressed risk	38	37	35	43C
Environmental concerns	36	41D	36	33
Government funding to address expensive issues	32	33	32	31
Government incentives to address issues	29	29	31	28
None/Nothing/NA/Refused	7	6	10BD	6

*QMotivators1: Motivators: Which of the following, if any, would encourage you to maintain a healthier home?*

*Note: Only mentions >1% shown. Letters denote statistically significant difference. For example, if there is a B then the result is significantly higher than the corresponding result in column B.*

## 2.10. Communication with Canadians about Environment Health Risks

### 2.10.1. Where Canadians look for information

Canadians look to a variety of sources for information on potential health risks in their home. The most common include search engines (39%), manufacturer product labels (29%), the Government of Canada website (25%), friends and family (24%), or the Public Health unit website (23%). Other common sources of information include:

- Provincial government websites (19%);
- Health professional websites (18%);
- Health professionals (18%);
- Municipal government websites (17%);
- News media (16%);
- Manufacturers websites (15%);
- Environmental group websites (14%);
- Social media (14%); or
- Health group websites (12%).

Full details can be found in Exhibit 2.10.1.a below.

This marks a departure from 2016, when manufacturer product labels were the most frequently consulted source of health risk information (38%) and few (5%) consulted the Government of Canada website. This suggests a significant number of Canadians may be aware of the Healthy Home campaign and trust the government to provide health risk information.

All demographic groups look to search engines like Google or Bing as their primary source of information. However, other sources of information vary by demographic. Specifically:

- Younger Canadians (18-34) are more likely to look to social media (20% vs. 8-15% among those 35+) and health professionals (23% vs. 15-18%) than their older counterparts;
  - Newcomers to Canada are also more likely to look to social media than the general population (30% vs. 11%); and
  - Pregnant people are more likely to look to social media than the general population (24% vs. 11%) and are more likely to rely on friends and family as a source of information (40% vs. 23%).
- This supports continuing to use social media to target key populations of concern.

**Exhibit 2.10.1.a Where Canadians look for information by Total, Age, Respondent Type**

	Total (A)	Age			Respondent Type				
		18-34 (B)	35-54 (C)	55+ (D)	Gen Pop (U)	Pregnant (V)	Parent (W)	New- comer (X)	Senior (Y)
<b>Base = actual</b>	<b>2187</b>	<b>732</b>	<b>767</b>	<b>688</b>	<b>1502</b>	<b>190</b>	<b>153</b>	<b>190</b>	<b>152</b>
Search Engine such as Google or Bing	39	34	39	41B	37	48U	40	31	50U
Manufacturer's product label	29	20	22	42BC	28	22	31	25	45U
Government of Canada website	25	26C	20	27C	24	30	23	28	29
Friends/family	24	28D	26D	20	23	40U	29	28	23
Public health unit website	23	24	20	24	23	27	19	21	27
Provincial government website	19	17	16	24BC	19	19	16	18	24
Health professional website	18	23CD	15	18	18	22	20	20	19
Health professionals	18	23CD	15	16	17	24	16	20	17
Municipal government website	17	16	15	18	16	15	14	21	17
News media	16	14	14	19	16	12	12	19	19
Manufacturer's website	15	17	13	16	14	16	12	15	26U
Environmental group website	14	15	11	15	13	15	13	18	13
Social media	14	20CD	15D	8	11	24U	16	30U	10
Health group website	12	13	12	12	12	15	13	15	9
Home inspectors	12	16D	12	9	12	19U	14	13	7
Other internet source	11	11	13	10	11	11	15	20U	6
Consumer group website	9	7	7	12BC	9	15	5	8	8
Magazines, newspapers or books	8	7	7	10	7	5	9	12U	13U
Retailers	8	8	7	8	7	9	11	9	9
Building contractors	6	8D	6	5	6	7	15U	3	2
1-800-O-Canada phone line	6	7D	7	4	6	6	1	7	3
Home shows or consumer shows	5	5	5	4	4	6	3	6	6
Blog	3	8CD	3D	1	3	6	3	12U	1
Realtors	2	4D	2	1	2	6U	3	5U	1

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None/Nothing/NA/Refused	1	*	1	2B	1	-	-*	-	3
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*QLook: Where Look. When looking for information on health risks (e.g., household chemicals, lead, carbon monoxide poisoning, radon, etc.) that may be present in your home, where do you look?*

*Note: Only mentions >1% shown. Letters denote statistically significant difference. For example, if there is a B then the result is significantly higher than the corresponding result in column B.*

*\* Denotes less than 1%*

*- Denotes 0*

### 2.10.2. Preferred format

When looking for information on health risks, more than half of Canadians prefer the format of websites (57%). Other preferred formats include:

- YouTube (27%);
- Speaking directly to a health professional (24%);
- Facebook (14%);
- Pamphlets/brochures/postcards (16%);
- Videos (10%);
- Instagram (7%);
- Mobile apps (7%);
- Blogs (6%);
- Twitter (5%);
- Tradeshow (5%);
- Webinars/presentations (5%); or
- Pinterest (4%).

Full details can be found in Exhibit 2.10.2.a.

In 2016, websites were also the preferred source of information about health risks (65%). Since that time, YouTube, Facebook, and other social media sites are increasing in preference (0-17% vs. 4-27% in 2021).

When it comes to social media, the following demographic groups differed from the rest of the population in the following ways:

- Younger Canadians (18-34) prefer all forms of social media formats;
- Pregnant people are more likely to prefer to look for information on Facebook (22% vs. 14%) or mobile apps (12% vs. 6%); and
- Newcomers are more likely to prefer almost all social media formats but show a preference for YouTube (45% vs. 26% among gen pop) and Facebook (20% vs. 14%).



**Exhibit 2.10.2.a Preferred format by Total, Age, Respondent Type**

	Total (A)	Age			Respondent Type				
		18-34 (B)	35-54 (C)	55+ (D)	Gen Pop (U)	Pregnant (V)	Parent (W)	New- comer (X)	Senior (Y)
<b>Base = actual</b>	<b>2187</b>	<b>732</b>	<b>767</b>	<b>688</b>	<b>1502</b>	<b>190</b>	<b>153</b>	<b>190</b>	<b>152</b>
Websites	57	53	56	61B	56	61	59	58	56
YouTube	27	36D	31D	17	26Y	27	27	45U	26
Speak to a health professional	24	25	22	24	22	21	28	26	22
Pamphlets/brochures/postcards	16	10	14	21BC	15	16	11	11	15
Facebook	14	18D	18D	7	14Y	22U	14	20U	14
Videos	10	17CD	10D	5	10	10	11	18U	10
Mobile apps	7	12CD	6	4	6	12U	11	13U	6
Instagram	7	15CD	7D	1	7Y	6	7	16U	7
Blogs	6	11CD	6D	2	5	8	8	15U	5
Twitter	5	9D	7D	1	5	6	1	9	5
TikTok	5	11CD	4D	1	4	8	3	15U	4
Trade shows, community events	5	4	4	7B	5	3	4	5	5
Webinars/Presentations	5	6	5	5	5	4	5	7	5
Podcasts	4	6D	5D	1	3	5	1	10U	3
Pinterest	4	8CD	3	2	3	8U	6	12U	3
Google/search engine	2	2	2	1	2	3	*	-	1
Friends/family	1	*	1	1	1	-	-	1	-
None/Nothing/NA/Refused	2	*	2	4B	3	-	*	-	4

*QFormat: Preferred Format: When looking for information on health risks (e.g., household chemicals, lead, carbon monoxide poisoning, radon, etc.) that may be present in your home, what format do you use most often?*

*Note: Letters denote statistically significant difference. For example, if there is a B then the result is significantly higher than the corresponding result in column B.*

*\* Denotes less than 1%*

*- Denotes 0*

## 3. Appendix A: Methodology

### Survey Administration

The online survey was conducted using computer assisted web interviewing (CAWI) technology. CAWI ensures the interview flows as it should with pre-programmed skip patterns. It also controls responses to ensure appropriate ranges and data validity. Surveys were conducted in English or French as chosen by the respondent. All participants were informed of the general purpose of the research, the sponsor, the supplier and that all of their responses would be confidential.

The online survey was conducted from January 24 to February 7, 2022. In total 2,187 surveys were completed. The average survey length was 20 minutes.

### Pre-test

A pre-test was undertaken on January 21, 2022 obtaining 10 English and 10 French completions, including probing questions. The results were reviewed to ensure the survey was working as expected and that the questions were being interpreted as expected. Based on the results of the pre-test, no changes were required and as such the results of the 20 completes were included in the final data set.

### Sample Design and Selection

A sample of Canadians was drawn from the Kantar proprietary panel to achieve 2,187 completed surveys among the target groups. 1,502 were drawn to be reflective of the population from age, gender and regional perspective. The remaining n=685 included an oversample of each of the following groups:

- Parents/guardians of children aged 6 and under (n=153)
- Pregnant people or people planning to become pregnant in the next 6 months (n=190)
- Seniors (65 years or older) (n=152)
- Newcomers to Canada (in Canada 5 years or less) (n=190)

### Margin of Error

As mentioned previously, panel sample was used for this survey. Panel surveys are considered a non-probability sample and as such margin of error does not apply and conclusions from these results cannot be generalized to any population. Given that this is an online panel, Canadians without internet access (6% of Canadians) will not be reached. Additionally, this survey will not cover Canadians who are not members of a panel; however, the total number of those who are not members of a panel cannot be calculated, as Kantar's panel partner may supplement or blend panel with external Canadian panel suppliers.

## Data Analysis

Analysis was undertaken to establish differences between the total population that was surveyed and a number of demographics within this group. More specifically analysis was undertaken to identify any differences based on age, gender, region, household income, children in the home, respondent type (general population, pregnant, parent, newcomer, senior), health condition, disability, dwelling type, home ownership, age of home and renovation status. Exact breaks can be found in the detailed tables. Only differences significant at the 95% confidence level are presented in this report. Any differences that are statistically significant (t-test) between these subgroups are indicated by denoting the column letter within the tables throughout the report.

## Weighting

Corrective weights were applied according to age, gender, region & household income based on the general Canadian adult population (18+) using Statistics Canada 2016 Census data.

## Online Completion Rate

A total of 8,706 invitations were sent to panelists, of which n=2,187 completed the survey. The overall completion rate achieved for the online study was 42.9%. The following table outlines the sample disposition and response rate calculation:

**Table 3 Completion Rate**

Total Invitations Sent	8706
Contacts	4494
Completes	2187
Break Offs	109
Over Quota	143
Non-Qualifiers	2763
Completion Rate	25.12%
Incidence Rate	42.9%

## Tabulated Data

Detailed tables are included under a separate cover.

## 4. Appendix B: Survey Instrument

**BLOCK1: Screener**

**Begin block**

**QLangSel: Language Selection**

**Single coded**

**Not back**

In which language would you like to be interviewed?  
Dans quelle langue aimeriez-vous être interviewé(e)?

**Normal**

- 1 English / Anglais
- 2 French / Français

**Scripter notes:** IF RESPONDENT CHOOSES ENGLISH, CONTINUE WITH THE REST OF THE SURVEY IN ENGLISH.  
IF RESPONDENT CHOOSES FRENCH, CONTINUE WITH THE REST OF THE SURVEY IN FRENCH.

**Not back**

Thank you for agreeing to take part in our survey. Kantar is currently conducting a survey on behalf of Health Canada on the knowledge, attitudes, and behaviours of Canadians about environmental health issues. The information in this survey will be used to contribute to the development of health programs and messaging. Your decision on whether or not to participate will not affect any dealings you may have with the Government of Canada.

Should you wish to verify the legitimacy of this survey you may contact Antonia Perhat at [antonia.perhat@kantar.com](mailto:antonia.perhat@kantar.com).

The survey will take about 15-20 minutes to complete.

**What about your personal information?**

The personal information you provide to Health Canada is governed in accordance with the Privacy Act and is being collected under the authority of section 4 of the Department of Health Act in accordance with the Treasury Board Directive on Privacy Practices. We only collect the information we need to conduct the research project.

**Purpose of collection:** We require your personal information such as demographic information to better understand the topic of the research. However, your responses are always combined with the responses of others for analysis and reporting; you will never be identified.

**For more information:** This personal information collection is described in the standard personal information bank Public Communications – PSU 914, in Info Source, available online at [infosource.gc.ca](http://infosource.gc.ca).

**Your rights under the Privacy Act:** In addition to protecting your personal information, the Privacy Act gives you the right to request access to and correction of your personal information. For more information about these rights, or about our privacy practices, please contact Health Canada's Privacy Coordinator at [privacy-vie.privee@hc-sc.gc.ca](mailto:privacy-vie.privee@hc-sc.gc.ca). You also have the right to file a complaint with the Privacy Commissioner of Canada if you think your personal information has been handled improperly.

**What happens after the online survey?**

The final report written by Kantar will be available to the public from Library and Archives Canada (<http://www.bac-lac.gc.ca/>).

Your assistance is greatly appreciated, and we look forward to receiving your feedback.

**QProvTer: Province/Territory**

Single coded

**Not back**

In which province or territory do you live?

**Normal**

- 1 Newfoundland and Labrador
- 2 Nova Scotia
- 3 Prince Edward Island
- 4 New Brunswick
- 5 Quebec
- 6 Ontario
- 7 Manitoba
- 8 Saskatchewan
- 9 Alberta
- 10 British Columbia
- 11 Northwest Territories
- 12 Nunavut
- 13 Yukon
- 14 Prefer not to answer

→ GO TO **QProvTer**Ask only if **QProvTer,14****ErrorMsg: Error Message**

Text

**Not back**

Sorry! We need the province or territory you live in in order to continue. If you select "Prefer not to answer" the survey will close.

**Scripter notes:** ASK QPROVETER AGAIN. IF SELECTED 'PREFER NOT TO ANSWER' AGAIN, TERMINATE.

**QRegion: Hidden region variable**

Single coded

**Not back | Dummy****Normal**

- 1 Atlantic - Answer is set if QProvTer=1,2,3,4
- 2 Quebec - Answer is set if QProvTer=5
- 3 Ontario - Answer is set if QProvTer=6
- 4 West - Answer is set if QProvTer=7,8,9,10
- 5 Territories - Answer is set if QProvTer=11,12,13

**QGender: Gender**

Single coded

**Not back**

What is your gender?

**Random**

- 1 Female
- 2 Male
- 3 Prefer to self identify: *\*Open \*Fixed*
- 4 Prefer not to answer *\*Fixed*

**QAGE1: Age Year**

Single coded

**Not back**

In what year were you born?

**Normal**

- 1 Select year (Drop down menu with YYYY format)
- 2 Prefer not to answer

**Scripter notes:** PUNCH 1 DROP DOWN MENU SHOULD INCLUDE YEARS IN FORMAT YYYY. IF WE DON'T HAVE A STANDARD START YEAR, YOU CAN START WITH 1922 UP TO 2022. MINIMUM YEAR/AGE TO QUALIFY IS 2003 (18 YEARS OLD). IF SELECTED 2004-2022, TERMINATE.

AUTOCODE AGE BREAKS AT QAGE2:

QAGE1 1997-2003 = 18 to 24 AT QAGE2  
 QAGE1 1987-1996 = 25 to 34 AT QAGE2  
 QAGE1 1977-1986 = 35 to 44 AT QAGE2  
 QAGE1 1967-1976 = 45 to 54 AT QAGE2  
 QAGE1 1957-1966 = 55 to 64 AT QAGE2  
 QAGE1 1956 or earlier = 65 or older AT QAGE2

Ask only if **QAGE1,2****QAGE2: Age Breaks**

Single coded

**Not back**

Would you be willing to indicate in which of the following age categories you belong?

**Normal**

- 1 18 to 24
- 2 25 to 34
- 3 35 to 44
- 4 45 to 54
- 5 55 to 64
- 6 65 or older
- 7 Prefer not to answer ➔ GO TO SCREEN OUT

**S1: Respondent Quota**

Multi coded

**Not back | Min = 1**

Are you...?

Select all that apply.

**Random**

- 1 Currently pregnant or planning to become pregnant in the next 6 months
- 2 A parent or guardian of child(ren) aged six years old or under
- 3 A newcomer to Canada who arrived in 2017 or later
- 4 None of the above *\*Fixed \*Exclusive*

**Scripter notes:** SHOW PUNCH 1 "Currently pregnant or planning to become pregnant in the next 6 months" ONLY IF SELECTED 'FEMALE' AT QGENDER.

**hGroupNum: Group Number**

Multi coded

**Answer not required | Not back | Dummy**

Hidden variable to define sample group numbers

RESEARCHER: UPDATE THE GROUP NUMBERS AND NAMES AS NEEDED. Answer text should follow the format of group#, Group Name (Ex: 1, National Sample)

SCRIPTER: Group Number - default setting is based on the survey URL 'grp' parameter [example: '&grp=321']

**Normal**

- 1 1, Gen Pop (Main)
- 2 2, All boosts together
- 3 3, Boost 1 - Parents/guardians of children aged 6 and under
- 4 4, Boost 2 - Pregnant women or women planning to become pregnant in the next 6 months
- 5 5, Boost 3 - Seniors (65 or older)
- 6 6, Boost 4 - Newcomers to Canada (5 years or less)

**Scripter notes:** Set the GroupFMR variable as a multi-punch variable "Set GroupFMR = GroupFMR + {X}" according to the definitions within the questionnaire.

Assign boost quotas (group 2) by least full. If quota full, move to next quota. Order of incidence from lowest to highest below. Do not double count if qualified for multiple samples.

Pregnant (n=190)  
 Newcomer (n=190)  
 Parent (n=150)  
 Senior (n=150)



**GroupFMR: Sample Groups For Field Metrics Report****Multi coded****Answer not required | Not back | Min = 1 | Dummy**

GroupFMR is a catch-all variable designed to have one consistent way to capture ANY groups we sample.

**Normal**

- 1 1, Gen Pop (Main) - *Answer is set if NOT QAGE2=7 and QProvTer=1,2,3,4,5,6,7,8,9,10,11,12,13 and QGender=1,2,3,4 and S1=1,2,3,4*
- 2 2, All boosts together - *Answer is set if QGender=1,2,3,4 and NOT QAGE2=7 and S1=1,2,3*
- 3 3, Boost 1 - Parents/guardians of children aged 6 and under - *Answer is set if S1=2*
- 4 4, Boost 2 - Pregnant women or women planning to become pregnant in the next 6 months - *Answer is set if QGender=1 and S1=1*
- 5 5, Boost 3 - Seniors (65 or older) - *Answer is set if QAGE2=6*
- 6 6, Boost 4 - Newcomers to Canada (5 years or less) - *Answer is set if S1=3*

**BLOCK1: Screener****End block****BLOCK2: Main Survey****Begin block**

**QPThreat: Product Threats**

Multi coded

**Not back | Min = 1**

Which of the following products, if any, do you think could pose health risks to you and your family?

Select all that apply.

**Random**

- 1 Personal care products such as cosmetics or hair products
- 2 Home fragrance products such as scented candles, room sprays or air fresheners
- 3 Household chemicals such as kitchen and bathroom cleaners
- 4 Turpentine, paint, paint strippers/thinners
- 5 Lead contained in paint
- 6 Building materials such as adhesives, sealants or insulation products
- 7 Materials used in hobbies or craft projects
- 8 Pesticides, herbicides, insecticides
- 9 Natural health products such as herbal remedies, vitamins and minerals, probiotics
- 10 Composite wood products such as plywood, particle board or medium-density fibreboard
- 998 None of the above *\*Fixed \*Exclusive*

**QThreat: Environmental Threat**

Multi coded

**Not back | Min = 1**

Which of the following, if any, do you think could pose health risks to you and your family?

Select all that apply.

**Random**

- 1 Flush or throw out pharmaceuticals or medications (prescription or over-the-counter)
- 2 Drinking water
- 3 Outdoor air
- 4 Indoor air
- 5 Soil from your garden or lawn
- 6 Radiation (including electromagnetic radiation)
- 7 Putting batteries, light bulbs or household chemical products in the garbage
- 8 Radon gas
- 9 Asbestos
- 10 Mould/humidity
- 11 Carbon monoxide
- 12 Cigarette smoke
- 13 Cannabis smoke
- 14 Wood smoke
- 15 Single-use plastics
- 998 None of the above *\*Fixed \*Exclusive*

**QCThreat: Chemical Threat**

Multi coded

**Not back | Min = 1**

Which of the following chemicals, if any, do you think could pose risks to you and your family?

Select all that apply.

**Random**

- 1 Boric Acid (borax, boron or borate)
- 2 Flame retardants
- 3 Formaldehyde
- 4 Phthalates
- 5 Talc
- 6 Mercury
- 7 Triclosan
- 8 Aluminum
- 9 Lead
- 10 Benzene
- 11 Bisphenol A (BPA)
- 998 None of the above *\*Fixed \*Exclusive*

**QMostCon: Most Concerned**

Multi coded

**Not back | Min = 3 | Max = 3**

Which of the following are you most concerned with?

Please select your top three in order of concern.

**Random**

- 1 Responses from QPTHREAT, QETHREAT AND CTHREAT

**Scripter notes:** USE ROWRANK TYPE OF QUESTION.  
 ANSWER LIST TO BE POPULATED WITH RESPONDENT SELECTIONS AT QPTHREAT, QETHREAT, CTHREAT.  
 RANDOMIZE ANSWER LIST, REGARDLESS OF WHICH QUESTION IT COMES FROM. RESPONDENT MUST SELECT MIN 3 AND MAX 3 ANSWERS. IF ANSWER LIST IS < 3, RANK TOP 2. IF ANSWER LIST =1, AUTOCODE AS 1.  
 IF SELECTED 'NONE OF THE ABOVE' FOR ALL 3 QUESTIONS QPTHREAT, QETHREAT, CTHREAT, SKIP TO QLASTRENO.

**QLastReno: Last time renovation was completed**

Single coded

**Not back**

When was the last time, if ever, interior renovations were completed in your home, by you or someone else?

This could include minor projects such as painting furniture or walls to more major projects such as finishing a basement.

**Normal**

- 1 In the past twelve months
- 2 In the past five years
- 3 More than five years ago
- 4 Never

Ask only if **QLastReno,1,2****QRENOBEH: Renovation Behaviours**

Matrix

**Not back | Number of rows: 7 | Number of columns: 6**

To what extent did you do each of the following during your renovations?

**Rows: Random | Columns: Normal****Rendered as Dynamic Grid**

	Always	Usually	About half of the time	Seldom	Never	Not Applicable
Wear protective gear such as gloves, a mask, and/or safety glasses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Keep your work areas well ventilated, let in fresh, clean air	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ventilate (open a window or turn on an exhaust fan) when using composite wood products such as plywood, particle board or medium-density fibreboard	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use low-emission products such as low Volatile Organic Compounds (VOC) paint or adhesives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consult a professional to test or remove asbestos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Test for lead-based paint before removing or stripping paint from the walls	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Keep vulnerable people such as children, pregnant people and seniors away from the worksite or room under renovation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**QCInHome: Cleaning Home**

**Matrix**

**Not back | Number of rows: 14 | Number of columns: 6**

When cleaning your home, how often do you do the following?

**Rows: Random | Columns: Normal**

**Rendered as Dynamic Grid**

	Always	Usually	About half of the time	Seldom	Never	Not Applicable
Follow the instructions on the label every time you use a household cleaner	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mix household chemical products together	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ensure proper ventilation by opening windows or doors and running exhaust fans, during and after using the product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use protective equipment such as goggles and rubber gloves as required	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wash your hands with soap and water after using a household chemical product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Choose low VOC cleaning products, that is, products that release less odour or off-gas less	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clean floors and household surfaces with a wet cloth or mop	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use a vacuum with a HEPA filter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regularly check chemical product containers for leaks or damage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Keep household chemical products out of reach and sight of young children	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Remove your outdoor shoes when inside the home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use a mattress or pillow cover on your bed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wash bedding on a weekly basis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Replace your furnace filter approximately every three months	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**QFood: Food Safety****Matrix****Not back | Number of rows: 8 | Number of columns: 6**

When preparing, cooking and/or storing food, how often do you do the following?

**Rows: Random | Columns: Normal****Rendered as Dynamic Grid**

	Always	Usually	About half of the time	Seldom	Never	Not Applicable
Look for a "microwave safe" label on glass, ceramic and plastic containers before putting in the microwave	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heat food in plastic single-use containers, such as margarine or yogurt tubs, styrofoam take-out containers, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pour hot liquids into plastic containers, such as margarine or yogurt containers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Store food in food-grade containers, such as glass or stainless steel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Store foods in plastic single-use containers such as margarine or yogurt tubs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Discard or recycle stained, chipped or cracked plastics and containers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use your range hood when cooking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Let your taps run until the water is cold before drinking, cooking or making baby food	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**QPerProd: Personal Care Products****Multi coded****Not back | Min = 1**

When purchasing personal care products such as shampoo, deodorants, cosmetics, or hand soaps do you...?

Select all that apply.

**Random**

- 1 Read the ingredients list
- 2 Avoid products with specific ingredients
- 998 None of the above *\*Fixed \*Exclusive*

Ask only if **QPerProd,1,2**

**QIngr: Ingredients**

Multi coded

**Not back | Min = 1**

Which of the following ingredients, if any, do you try to avoid when purchasing personal care products?

Select all that apply.

**Random**

- 1 Parabens
- 2 Talc
- 3 Essential oils
- 4 Salicylic Acid
- 5 Triclosan
- 6 Aluminum
- 7 Petrolatum
- 8 PFAS
- 9 Fragrance
- 10 Acetone
- 11 Formaldehyde
- 12 Sulfates
- 13 Dimethicone
- 14 Glycerin
- 996 Other (specify): *\*Open \*Fixed*
- 998 None of the above *\*Fixed \*Exclusive*

**QOTHER: Other Environmental Health Behaviours**

Multi coded

**Not back | Min = 1**

Have you ever done any of the following?

Select all that apply.

**Random**

- 1 Tested for radon in your home
- 2 Tested for lead in your drinking water
- 3 Tested your water for other potential contaminants
- 4 Installed a carbon monoxide alarm in your home
- 5 Have your furnace inspected annually
- 6 Have your water heater inspected annually
- 7 Have your air conditioning inspected annually
- 8 Have your gas or wood fireplace services or inspected annually
- 9 Tested the paint in your house for lead
- 10 Regularly check the Air Quality Health Index during heat waves
- 998 None of the above *\*Fixed \*Exclusive*

Ask only if **QOTHER,4**

**QCODet: Carbon Monoxide Alarm**

Multi coded

**Not back | Min = 1**

Where is your carbon monoxide alarm located in your home?

Select all that apply.

**Random**

- 1 Beside a fuel burning appliance such as a furnace or water heater
- 2 In a hallway outside sleeping areas
- 3 On the main floor of the home
- 4 In a bedroom
- 996 Other (specify): *\*Open \*Fixed*
- 999 Don't know *\*Fixed \*Exclusive*

**QPBPMMessage: Protective Behaviours Priority Messaging**

Matrix

**Not back | Number of rows: 5 | Number of columns: 5**

How often do you undertake the following activities?

**Rows: Random | Columns: Normal**

**Rendered as Dynamic Grid**

	Always	Usually	About half of the time	Seldom	Never
Dispose of chemical products using municipal guidelines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Take unused pharmaceuticals to a pharmacy for disposal (both prescription and over-the-counter)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Turn on exhaust fans or open a window while showering	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Keep indoor moisture and humidity levels low to prevent mould	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clean up small amounts of mould with water and dish soap	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**BLOCK2a: Barriers and Motivators**

Begin block

**Scripter notes:** RANDOMIZE ORDER ASKED FOR QBARRIERS AND QMOTIVATORS



**QBarriers1: Barriers**

Multi coded

**Not back | Min = 1**

Which of the following, if any, prevent you from maintaining a healthier home?

Select all that apply.

**Random**

- 1 It costs too much to address the issue
- 2 The information available is confusing, complicated or contradictory
- 3 I don't know where to find reliable information
- 4 I rent my house /apartment, so I don't have control of the issue of concern
- 5 Not enough time to address the issue
- 6 I am currently able to maintain a healthy home *\*Fixed \*Exclusive*
- 996 Other (specify): *\*Open \*Fixed*
- 998 None of the above *\*Fixed \*Exclusive*

**QMotivators1: Motivators**

Multi coded

**Not back | Min = 1**

Which of the following, if any, would encourage you to maintain a healthier home?

Select all that apply.

**Random**

- 1 Understanding/knowledge of the risks
- 2 Easy and free ways to address risks
- 3 Personal health
- 4 Health of my family/children
- 5 Environmental concerns
- 6 Fear of illness due to unaddressed risk
- 7 Government funding to address expensive issues
- 8 Government incentives to address issues
- 996 Other (specify): *\*Open \*Fixed*
- 998 None of the above *\*Fixed \*Exclusive*

**BLOCK2a: Barriers and Motivators****End block**

**QLook: Where Look**

Multi coded

**Not back | Min = 1**

When looking for information on health risks (e.g., household chemicals, lead, carbon monoxide poisoning, radon, etc.) that may be present in your home, where do you look?

Select all that apply.

**Random**

- 1 **Internet:**
- 2 Search Engine such as Google or Bing
- 3 Government of Canada website
- 4 Provincial government website
- 5 Municipal government website
- 6 Public health unit website
- 7 Environmental group website
- 8 Health group website
- 9 Consumer group website
- 10 Manufacturer's website
- 11 Health professional website
- 12 Blog
- 13 Social Media
- 14 Other internet source
- 15 Home shows or consumer shows
- 16 Health professionals
- 17 Building contractors
- 18 Realtors
- 19 Home inspectors
- 20 Manufacturer's product label
- 21 1-800-O-Canada phone line
- 22 Magazines, newspapers or books
- 23 News media
- 24 Retailers
- 25 Friends/family
- 996 Other (specify): \*Open \*Fixed

**Scripter notes:** PUNCHES 2-14 SHOULD ALL BE OPTIONS UNDER THE INTERNET HEADER (NOTED AS PUNCH 1) **IN THE TABLES ONLY.**  
RANDOMIZE PUNCHES 2-13, KEEP PUNCH 14 FIXED.

**QFormat: Preferred Format**

Multi coded

**Not back | Min = 1**

When looking for information on health risks (e.g., household chemicals, lead, carbon monoxide poisoning, radon, etc.) that may be present in your home, what format do you use most often?

Select all that apply.

**Random**

- 1 Websites
- 2 Pamphlets/brochures/postcards
- 3 Videos
- 4 Podcasts
- 5 Mobile apps
- 6 Facebook
- 7 Twitter
- 8 Pinterest
- 9 YouTube
- 10 Instagram
- 11 TikTok
- 12 Blogs
- 13 Trade shows, community events
- 14 Webinars/Presentations
- 15 Speak to a health professional
- 996 Other (specify): *\*Open \*Fixed*

**BLOCK2: Main Survey**

**End block**

**BLOCK3: Demographics**

**Begin block**

**QDwelType: Type of Dwelling**

Single coded

**Not back**

Which of the following best describes your home?

**Normal**

- 1 A single-family house detached from any other house
- 2 A single-family house attached to one or more houses (e.g. a townhouse or duplex)
- 3 An apartment building or condominium
- 4 A mobile home or trailer
- 996 Other (specify): *\*Open \*Fixed*
- 999 Don't know *\*Fixed \*Exclusive*

**QOwn: Own or Rent Home**

Single coded

**Not back**

Do you...?

**Normal**

- 1 Own your home or condominium
- 2 Rent your home or apartment
- 3 None of the above**

**QHomeYear: Year Home Built**

Single coded

**Not back**

When was your home built?

**Normal**

- 1 Prior to 1976
- 2 1976-1989
- 3 1990 or later
- 999 Don't know *\*Fixed \*Exclusive*

**QHHInc: Household Income**

Single coded

**Not back**

Which of the following best describes your total household income last year, before taxes, from all sources for all household members?

**Normal**

- 1 Under \$20,000
- 2 \$20,000 to just under \$40,000
- 3 \$40,000 to just under \$60,000
- 4 \$60,000 to just under \$80,000
- 5 \$80,000 to just under \$100,000
- 6 \$100,000 to just under \$150,000
- 7 \$150,000 and above
- 8 Prefer not to answer

**QChild: Children in the home**

Multi coded

**Not back | Min = 1**

Do you have children in the following age groups living in your household?

Select all that apply.

**Normal**

- 1 6 years and under
- 2 7-12 years old
- 3 13-17 years old
- 4 No children under 18 live in my household *\*Fixed \*Exclusive*

**QDis: Disability**

Single coded

**Not back**

Do you identify as a person with a disability? A person with a disability is a person who has a long-term or recurring impairment (such as vision, hearing, mobility, flexibility, dexterity, pain, learning, developmental, memory or mental health-related) which limits their daily activities inside or outside the home (such as at school, work, or in the community in general).

**Normal**

- 1 Yes
- 2 No
- 999 Don't know *\*Fixed \*Exclusive*
- 3 Prefer not to answer *\*Fixed*

**QHI: HEALTH IMPACT****Single coded****Not back**

People with pre-existing health conditions may be at greater risk of exposure to chemicals and pollutants in the home. Do you or anyone in your household have a pre-existing health condition? For example, asthma, allergies, immunocompromised?

**Normal**

- 1 Yes
- 2 No
- 999 Don't know *\*Fixed \*Exclusive*
- 3 Prefer not to answer

**QHomeLang: Language Spoken at Home****Multi coded****Not back | Min = 1**

What language do you speak most often at home?

**Normal**

- 1 English
- 2 French
- 996 Other (specify): *\*Open \*Fixed*
- 3 Prefer not to answer *\*Fixed \*Exclusive*

**PretestOE: Pre-test Open End****Open****Not back**

Thank you for taking the time to complete this survey. We are currently testing the questionnaire for clarity and ease of understanding. Were there any aspects of the survey or questions that you found unclear or difficult to understand? Do you have any suggestions to improve this survey?

**Scripter notes:** CAP AT N=10 EN AND N=10 FR CA AT QUOTA QTEST. ONCE QTEST IS FULL, SKIP THIS QUESTION.

**LearnMore: Learn More about healthy home**

**Text**

**Not back**

Should you wish to learn more about environmental health in relation to your home, please visit the following website:

Canada.ca/healthy-home (English survey)

Canada.ca/maison-saine (French survey)

**Scripter notes:** HYPERLINK WEBSITES.

**BLOCK3: Demographics**

**End block**